Competition in the Canadian Petroleum Industry

Introduction, Conclusions and Recommendations

Restrictive
Trade Practices
Commission

Canada

The complete Report of the Restrictive Trade Practices Commission regarding competition in the Canadian petroleum industry encompasses over 700 pages. This volume consists of the introductory chapters and the conclusions and recommendations from that Report.

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May 16, 1986

Dear Minister,

I am transmitting to you the French and English texts of a Report by the Restrictive Trade Practices Commission entitled "Competition in the Canadian Petroleum Industry".

This Report follows from proceedings carried out under section 47 of the Combines Investigation Act relating to the exploration for, and the importation, production, purchase, manufacture, storage, transportation, distribution, barter, sale and supply of crude oil, petroleum, refined petroleum products and related products.

The Report is accompanied by an abridged version containing its introductory material and its conclusions and recommendations. Most of the appendices are contained in a third volume.

The Commissioners have sought to fulfill their mandate with respect to the inquiry into the petroleum industry and as well, address the relevance of their appraisal and recommendations to Bill C-91, the new competition legislation now before Parliament.

Yours sincerely,

O.G. Stoner

O.G. Stoner
Chairman

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Preface

If new legislation proceeds as now drafted in Bill C-91, this will be the last report of a section 47 inquiry of the Restrictive Trade Practices Commission. While the Commission has been asked in previous years to look at some very large industries, none can match the petroleum industry for complexity, volatility, size and influence. Apart from Petro-Canada, the Canadian "majors" are affiliates of enterprises that operate on a worldwide scale and are essentially supra-national entities. The growth and success of these very large undertakings, matched by parallel opportunities for independent or small business, make an inestimable contribution to the economic well-being of Canada. However, as with almost everything else, there must be some checks and balances — in this case national policies that can balance private good and public need. This report is about one of the checks and balances — an effective competition policy.

The Director's inquiry in this matter began in 1973, and the proceedings before the Commission in 1981, with attendant demands on all those involved. The last five years have been exhaustive and exhausting for the Commissioners, and the entire inquiry must have been even more so for the participants. As a measure of attrition of the length of this process, only two of the four original Commissioners remain to complete and sign the Report. We are certain that retirement, mergers and even acts of God may have reaped similar losses with the petroleum companies and other participants.

Mr. R.S. MacLellan who sat throughout most of the hearings, while no longer a Member since May 1984, has been of great help and moral support. He has considered our findings and agrees with the thrust of the Report.

We were ably assisted in our work by a small but effective staff including an Executive Director, and by counsel. We are indebted to them for their assistance and perseverance — especially the tiny group who remained to the end. Without them, our task would have been impossible. However, the contents of the Report are the responsibility of the Commissioners. On all Conclusions and Recommendations excepting those dealing with the alleged overcharge prior to 1973, there was full agreement between us.

The Commissioners wish to express their appreciation to each of the many witnesses and organizations listed in Appendix B who, at considerable effort, inconvenience and no doubt expense to them, patiently educated the Commission about the many aspects of this complicated industry and about various specific events that have occurred. The evidence came from large and small businesses, from government bodies and from consumer organizations. In each case it has been studied in detail by the Commissioners and has almost invariably been useful, even though it has not been possible to recite the detail of all the evidence in the Report.

The last months of the Inquiry were marked by major developments in the Canadian industry and in government policies that gave rise to widespread political and public reaction. The Commissioners have sought to deal with these matters, including a specific request from the Minister of Consumer and Corporate Affairs in January 1986, within the context of its mandate.

The Commissioners, in addition to setting out their appraisal and recommendations to the Minister with respect to industry practices have also related these, where appropriate, to Bill C-91 — the new competition legislation now before Parliament — in the hope that this will be helpful to both the Minister and Parliament in addressing issues of growing importance to all Canadians.

In addition to the full Report, an abridged volume containing the Introductory Chapters and the Conclusions and Recommendations, and a third volume containing appendices, are being submitted concurrently.

The Commissioners are appreciative of the patience of those who await this Report and trust that its modest contribution will be of help to governments, to the public and perhaps, even to the industry itself.

I

The Context, Mandate and Focus

1. Why An Inquiry?

The majority of Canadians are most acutely aware of the petroleum industry when they buy gasoline for their cars. Next to the weather, and perhaps taxes, few topics generate greater public comment than the prices of gasoline. It appears to many consumers that gasoline prices are established in markets that are insufficiently competitive. How else to explain why the pump prices at all service stations in a particular area are virtually the same and that those prices rise, and occasionally fall, in unison?

Despite the high visibility of the petroleum industry, it continues to have a certain air of mystery about it; it continues to be regarded by many with suspicion or skepticism. People wonder about the relationship between prices at the gas pump and crude oil prices. Do Canadian consumers pay more for their gasoline than their counterparts across the border in the United States? Why can pump prices be as much as 10-15 cents/litre(¢/*l*) higher in some provinces and municipalities than in others only a short distance away?

Whether or not they always realize it, those who ask the above questions are asking a more fundamental question namely, how much competition is there in the Canadian petroleum industry?

In Canada, the principal federal legislative instrument for protecting the public interest from anticompetitive conduct is the Combines Investigation Act — an Act "to provide for the investigation of combines, monopolies, trusts and mergers."

The Combines Investigation Act establishes two separate agencies for its administration: the Director of Investigation and Research, and the Restrictive Trade Practices Commission. As his title suggests, the Director is an investigator or "policeman". He conducts investigations in private and, on the basis of his assessment of the evidence and material he gathers, may recommend or initiate enforcement proceedings or other proceedings under the Act. People often confuse the role of the Director with that of the

Commission. During this inquiry the media has frequently described materials published by the Director as "reports" by the Commission. The Commission is entirely separate from the Director. The Commission acts as an independent review body or tribunal, not unlike a court in certain respects. It has certain responsibilities to report its assessments and recommendations to the Minister and is empowered in some types of proceedings (which this one was not) to make binding orders regarding certain types of distribution practices. In the performance of its responsibilities the Commission may, and did in this case, receive evidence in public from all interested persons.

The Act establishes the separate mandates and authorities of the Director and of the Commission. The sections of the Act under which this inquiry has been conducted provide in relevant part as follows:

> 47(1)(a). *The Director* upon his own initiative may ... carry out an inquiry concerning the *existence and effect of conditions or practices* relating to any product that may be the subject of trade or commerce and which conditions or practices are *related to monopolistic situations or restraint of trade*...
>
> 47(2). It is the duty of *the Commission* to consider any evidence or material brought before it under subsection (1) together with such further evidence or material as the Commission considers advisable and to report thereon in writing to the Minister, and for the purposes of this Act any such report shall be deemed to be a report under section 19.
>
> 19(2). The report ... shall review the evidence and material, appraise the effect on the *public interest* of arrangements and practices disclosed in the evidence and contain recommendations as to the application of remedies provided in this Act or other remedies.
>
> [Emphasis added]

The Act also makes provision for any six adult residents of Canada who believe a person (or company) has contravened or failed to comply with the Act or has done or is doing something remediable under the Act, to require the Director to conduct an investigation into the matter complained of. It was just such a "six citizen complaint" that led to the inquiry which is the subject of this Report.

In February, 1973, persons acting on behalf of the Consumers' Association of Canada requested that the Director investigate whether the gasoline and fuel oil price increases made a month earlier by a number of Canadian oil companies were the result of a conspiracy and to determine more generally, whether or not vertical integration had contributed to higher prices for gasoline and fuel oil.

The Director responded to the above application by launching a private and confidential investigation. When he began he could not have known what further proceedings, if any, might appear to him to be appropriate when his investigation was completed. His options, under the law, were to 1) discontinue the investigation, 2) submit evidence to the Commission, or directly to the Attorney General, for consideration as to whether criminal prosecution or other action should be instituted, 3) apply to the Commission for orders prohibiting certain types of conduct by specified persons or companies, or 4) submit evidence and material to the Commission for consideration under the provisions of section 47 of the Combines Investigation Act. He took the latter course.

The Director subsequently reported to the Commission that in the course of conducting his investigation he had exercised his statutory powers and had seized a large number of documents from the premises of several petroleum companies in 1973, 1974 and 1978. In 1975 he had examined several witnesses under oath, and in 1976 had obtained written returns of information from over 90 petroleum and pipeline companies. In addition, interviews had been conducted with gasoline and fuel oil dealers. Other information had been gathered from a range of public sources. Following the above investigative actions, the Director prepared a seven-volume "Statement of Evidence and Material" or "Green Book".

On February 27, 1981 the Director submitted his Green Book to this Commission pursuant to section 47 of the Act. That Green Book, entitled "The State of Competition in the Canadian Petroleum Industry" contained almost 1,400 pages of printed text. It was supported by approximately 100 volumes of seized documents and other materials. It reported on the Director's investigation relating to "the exploration for, and the importation, production, purchase, manufacture, storage, transportation, distribution, barter, supply and sale of crude oil, petroleum, refined petroleum products and related products."

The Commission is required by statute to consider the evidence and material received from the Director, together with such further evidence or material as it considers advisable, and to report its appraisal and recommendations to the Minister of Consumer and Corporate Affairs. It is important to appreciate the nature of a section 47 inquiry. Although much of the evidence and argument often relates to company conduct or government interventions and their respective consequences, a section 47 inquiry is essentially an examination of the workings of the market or markets involved. It is not a trial, not an adjudication of rights. No binding orders are being made adverse to someone's interests. The Commission's report is advisory. Decisions as to what action to take, if any, are the responsibility of the

Minister, the Government and law enforcement officials, and not the Commission.

The Green Book as submitted to the Commission in 1981 (and various press releases issued to the media by the Director shortly thereafter), represented nothing more than the Director's statement of what he believed, on the basis of such evidence as was available to him at the time, that he could "prove" in subsequent proceedings. At the time the Green Book was submitted to the Commission it was still a confidential document. No one had yet had a chance to challenge his understanding of the facts, or his analysis. His Green Book might be likened to a statement of a prosecutor's or a plaintiff's case.

As is indicated by the long formal title of the Director's material, the Green Book explored a broad spectrum of industry activities including the offshore and domestic supply of crude oil to Canadian refiners, shipping and pipeline transport of crude oil to the refineries, refining in Canada, and the distribution of refined product, particularly gasoline, to end users in Canada. In the broadest terms the Director concluded, on the basis of his private study of the material available to him, that there were conditions and practices in each sector of the industry that were undesirably monopolistic and restrictive, and that the fact that the same major firms were "dominant" in each of the sectors facilitated and magnified the effect of the undesirable practices.

Although the Green Book and the media reports following its release, focused on the conduct of a number of Canada's petroleum companies, the Green Book also reported on the Director's review of certain government policies which he believed had lessened competition in the industry.

Although the Director's Green Book dealt almost exclusively with facts and circumstances in the period 1958 to 1973, the Director reported in the Green Book, in 1981, that "the Director's experience with the petroleum industry right up to the present has confirmed that the issues that were important when the petroleum inquiry commenced in 1973 remain important today". He proposed 12 recommendations to the Commission that in his view were required to deal with "the monopolistic conditions and practices in restraint of trade that he found".

As has been stated, the Director's inquiry was conducted in confidence and the Green Book was confidential when it was submitted to the Commission. However, the contents of the Green Book and in particular petroleum pricing, involve subjects of intense and quite proper, public interest and concern. A wide range of persons, not the least of whom were the large petroleum companies who were subjected to criticism in the Green Book, had an interest in the Director's study and in his recommendations. In view of the widespread interest in the operations of the petroleum industry and the broad issues raised in the Green Book concerning both energy policy and competition policy, the Chairman of the Commission ordered, pursuant to section 27 of the Act, that the Commission would hear evidence and receive comment and submissions in public. In the view of the Chairman and the Commission it was imperative that the petroleum companies and all other interested persons, including federal and provincial government agencies, have the fullest opportunity to present evidence and to comment regarding the Director's work and, perhaps more importantly so far as current and future public policy is concerned, regarding the post-1973 developments in both the upstream and downstream sectors which had not been addressed at any length in the Green Book.

The true nature or status of the Green Book was lost in the publicity which followed its release. Its publication was immediately followed by media reports that Canadian consumers had been "ripped off" (a term not used in the Director's statement of evidence) over a long period of time by Canada's major petroleum companies. There was an immediate outcry in Parliament and elsewhere as a result of the Green Book's allegation that Canadian consumers had been "overcharged" some 12 billion dollars by the oil industry and that the "overcharge" was continuing. The oil companies implicated in the Green Book immediately responded through their own media campaigns to deny that they had been involved in any illegal or unethical conduct. Various interest groups interpreted the Green Book and the media reports from their own, self-serving, perspectives.

The extreme and adversarial nature of some of the Director's criticisms and conclusions, and the way in which the Director had publicized them, resulted in the proceedings before the Commission being of an adversarial nature throughout.

The Commission's interest in a section 47 inquiry would normally be confined to matters of current and future concern, extending to historical information and material only so far as that was helpful to an understanding of the present. In this case, however, very serious criticisms of some petroleum companies, and to a lesser extent of governmental policies, were made by the Director relating to incidents, policies and practices that existed in the 1960s and 1970s, and sometimes in a form that inflamed public opinion when the Green Book was published. Considerations of fairness alone required that the fullest opportunity be given to those criticized to respond in detail, and for others who wished to support the Director's position to do so. Further, the Commission felt that it owed the public its judgement as to what the evidence demonstrated about the criticisms after all the responses had been heard. This added considerably to what the Commission's task would normally have been because the relevant documentary evidence was extensive, but the reputations of companies who continue to solicit the business of consumers were involved. Thus the Green Book took on an importance greater than Statements of Evidence submitted to the Commission in earlier section 47 inquiries.

Over the years there have been various inquiries of one form or another into aspects of the petroleum industry in Canada. Some have been carried out by provincial bodies, some by federal bodies and, indeed, others have been carried out into very specific matters by this Commission. These reports were all reviewed with benefit by the Commission. Their work was not duplicated. None of those earlier studies, however, had the comprehensive scope of this inquiry or the general interest, given the inescapable fact that gasoline was roughly 11¢/*l* in 1971 and 50¢/*l* in 1985. Today, the interest of Parliamentarians, the public and the media is on falling world crude oil prices and on the relationship between those prices and retail product prices.

2. Conduct and Procedures of the Hearings

In view of the broad and complex subject matter of its proceedings, and in order to facilitate meaningful participation, the Commission took certain steps to ensure a full and fair opportunity for all who wished to respond to or to supplement the Green Book or other evidence, to do so. The Commission also realized that defining issues and making the hearings efficient was important. Following a general organizational pre-hearing conference held in July, 1981, the Commission adopted Rules of Practice and Procedure for its proceedings, one of the provisions of which was that the substance of all testimony to be given would be communicated in writing, in advance, to all persons who wished to receive advance notice for purposes of preparing cross-examination or other evidence. Second, after hearing opening statements, the Commission held hearings in various centres across Canada from December, 1981 to February, 1982 in order to facilitate the participation of local groups who wished to be heard and also to learn the range and degree of urgency of concerns, if any, that existed in any part of the country regarding the functioning of any aspect of the Canadian petroleum industry. These hearings, like the Commission's hearings generally, were publicized by advance notice in newspapers and other media.

The complaints heard during the regional hearings at the outset of the inquiry gave the Commissioners some initial insights into the grass roots' perception of their role. The early hearings, at which gasoline and heating oil dealers and their associations gave evidence, set a pattern for the highly adversarial nature of the inquiry and gave notice of emotional undertones that were to run throughout its duration. Some of the issues raised during the regional hearings were outside the Commission's mandate; nevertheless, they served to expose the Commission to a lot of basic information about the way in which the industry operates. Consumers also had a chance to make their views known. Quite understandably, their resources and information were limited in relation to those of other participants.

Finally, it was clear that the pulse of the nation, if difficult to detect, was only of diagnostic value in proving that the patient was simply a bionic reproduction of several widely differing interest groups. In all of this, there was nothing new, and the Commission was obliged to look elsewhere to fashion its approach to the rest of the inquiry and in particular, to the preparation of its Report.

When it moved to Ottawa, the Commission, in interests of efficiency and economy, organized its hearings, so far as possible, into the subject-matter phases of the international, refining and marketing sectors in that order. Within each such phase of the hearings the Commission heard evidence first from the Director, then from other persons who were not refiners, and finally from the refining companies who were by then more fully familiar with the various criticisms being made of them and had a fairer opportunity to answer. Where witnesses whom the Commission felt would be helpful to it had not testified in the course of this process, the Commission itself arranged for them to testify.

The fact that inquiries are public tends to increase the scope of the evidence heard. While the Director is responsible for preparing the initial "material" to be heard by the Commission, interest groups and members of the public who are not the Director's witnesses often wish to be heard as well. An inquiry which is initially complex and broad is likely to be made more so by the participation of the public, including members of the industry who would like to bring a complaint before the Commission or to express a point of view. As in the case of other evidence, it was often difficult to decide beforehand whether or not these interventions would be useful in the determination of the essential issues.

The Commission held over 200 days of hearings and heard evidence from over 200 witnesses. The transcript is over 50,000 pages long. The record includes approximately 1,800 exhibits, many of which were lengthy and complex and one of which consisted of approximately one hundred volumes of documents that had been referred to by the Director in the Green Book.

Although the Commission used its power to subpoena witnesses as required in the course of the proceedings, it generally received full cooperation throughout from the petroleum companies, from federal and provincial government agencies and, indeed, from most of those who appeared and from whom the Commission sought assistance. Each of the major petroleum companies presented comprehensive and detailed evidence through senior and experienced officials and personnel, all of whom submitted to extensive questioning by the Director, by the Commission and by others. The petroleum companies and many witnesses have also in large measure answered further Commission queries and requests for information in writing without delay.

Proceedings under section 47 have always been public, although evidence deemed to be confidential has been taken in private from time to time, upon application. The extent to which evidence received in private has been revealed has been guided by balancing the public's interest in knowing the facts against possible harm to the parties and to competition. Reports have always been made public in their entirety, which is the case with this Report. Care has been taken to avoid a violation of commercially sensitive information unless it was required for the essential needs of the Report.

Most of the hearings were open to the public. On a few occasions the Commission agreed with requests of witnesses that they should not be required to share with their competitors, or with others, certain confidential business strategies or policies. When the Commission heard evidence on those particular topics *in camera*, where an *in camera* session appeared to be the best way to meet the procedural objectives of fairness and efficiency, this was done with the general understanding that the Commissioners would subsequently review the evidence given in those sessions and, after providing an opportunity for further submissions, would place on the public record those portions of the evidence where aspects of the public interest or specific competition issues were raised so that all participants would be informed and could respond. Thus a general descriptive statement of the portion of the evidence that remained on the confidential record was made public in a form satisfactory to the Commission, to the Director, and to the person or persons whose private information it was.

Following the hearing of all the evidence on substantive matters, the Commission received written arguments regarding those matters from the Director, from others who had criticisms of the refining petroleum companies, and from the refining petroleum companies, in turn. The written submissions were lengthy and detailed and greatly assisted the Commission.

3. Mandate and Focus

The Commission's mandate is set out in the words of the Combines Investigation Act (and more particularly in this proceeding, under section 47 of the Act.)

Commission proceedings under section 47, concern "the existence and effect of conditions or practices relating to any product that may be the subject of trade or commerce and which conditions or practices are related to monopolistic situations or restraint of trade."

Even a casual examination of the language of sections 47 and 19(2) of the Act reveals that the Commission's mandate is set out in very broad and general terms. It is left to the Commission to interpret and define more precisely the terminology of the Act. In the Commission's view there are certain essential tasks it must perform. The first is to determine whether or not there is in fact a monopolistic situation or a restraint of trade. The second, is to determine whether or not the monopolistic situation or restraint of trade has an appreciable effect on the marketplace. Finally, it must decide whether there are reasonable applications of or changes in public policy that it could recommend which could eliminate or reduce the constraint or otherwise compensate for its effects.

These elements are colored by the requirement that the Commission "appraise the effect on the public interest" of the practices or arrangements in question. The Commission's view of the public interest must be guided by the context created by the Act. Nevertheless, it cannot ignore or treat in a cavalier fashion other public interest issues or other policy objectives of governments. In short, in seeking to carry out its mandate, the Commission must recognize that policy makers are often faced with conflicting public policy objectives and must balance or trade off these conflicting objectives.

With respect to the first of the three steps referred above, it is often difficult to determine whether a monopolistic condition or a restraint of trade exists. The answer is rarely obvious and there is usually much scope for judgement to be exercised. For example, the practice of consignment selling[1] discussed later in the Report can be viewed as a mechanism by which the oil companies provide financial support to their dealers during periods when pump prices have fallen below normal levels, perhaps during a price war. Alternatively, the same practice might be interpreted as a procedure through which the oil companies gain the right to set retail prices for their own purposes. It may also be seen as having both effects. The Commission must then decide whether or not it can generalize about the balance of effects of the practice, or whether or not the practice is only harmful under certain market conditions and whether or not these conditions can be easily identified.

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[1] Under consignment selling the refiners retain ownership of the gasoline and the dealers, acting as their agents, receive a per-unit commission.

The second requirement in a section 47 inquiry is to decide on the degree to which the condition or practice in question affects competition in the marketplace. Isolated events which are not likely to recur, or those with marginal effects, are unlikely to be seen as requiring remedial action. There is a major strand running through the Act, which is the prevention of reductions in competition to a material degree. The presence of qualifiers such as "unduly" and "substantial" suggest that as a matter of public policy actors in the marketplace should be left alone unless there is an appreciable adverse impact on competition. The one possible exception to this general working principle is where the conduct in question, in the Commission's view, has no redeeming features from a public policy viewpoint.

For either or both of the first two requirements to be satisfied, the Commission must conclude that the condition or practice will create, increase or entrench *market power* — the power to limit supply and thus to increase prices. The potential for such control to exist is present when sellers are few and can easily have a meeting of minds on prices, when buyers are many and without bargaining power or good information, when supply cannot readily be increased through imports, when close substitutes do not exist, and when growth of smaller competitors or the entry of new firms is difficult. These are the criteria which are used in appraising or evaluating the market conditions against which the practices investigated in the inquiry have been assessed.

Churchill once suggested that facts are like butterflies — the last person to perceive them in full flight has the edge on their color and shape. While the factors underlying market power are easy to set out, there are often wide differences of opinion regarding their relative importance. They are also often difficult to evaluate in practice and are best viewed in an historical, dynamic context rather than as a snapshot frozen in time. Speaking generally, the weight to be given to the number of large competitors in creating market power has been in a state of flux in the legal/economic literature for a number of years. The same is true regarding what constitutes barriers to new entrants. While the Commission must recognize the changes in legal and economic concepts and the empirical studies associated with the identification of the variables that are important factors in creating, preserving or enhancing market power, at the end of the day it must be pragmatic and draw on the specific facts before it in forming its judgements.

Market power is one side of the proverbial coin. It is widely recognized that certain types of conduct can increase control over supply and price. It is also recognized that the same conduct can lead to the benefits of greater efficiency. This consideration must be taken into account when first evaluating whether the conduct or situation is indeed monopolistic. It recurs when consideration is being given to whether or not remedies should be recommended. The Commission must decide whether the effects on market power or on cost reductions dominate. The supply characteristics in the refining industry — large plants with high fixed costs — raise precisely those questions which involve the dual considerations of market power and efficiency. At what point would the public interest benefit more from having a larger number of competitors in a market than it would from having fewer competitors with larger, more efficient refineries? To what extent does the interest in reducing the risk, and cost, of the enormous capital investment that refineries require, justify long-term supply arrangements which tend to foreclose these markets to existing or potential competitors? In general terms, how responsive is the industry to forces of change, and would restraints on the industry's flexibility to adjust have a sufficient public-interest justification? These questions call for judgements that cannot, unfortunately, be reduced to simple quantitative calculations and comparisons of "costs" and "benefits". They must be made on the basis of information that is rarely free from ambiguity and which sometimes leaves room for reasonable differences of view.

This approach to evaluating particular situations or types of conduct obscures certain characteristics of the present inquiry which it shares with many of its predecessors. The practices cannot be evaluated in isolation. They must be examined against the background of other practices, the environment created by many government policies, and by international market forces. In reaching its conclusions and recommendations, the Commission has given considerable attention to government policies in order to see whether or not they create impediments to the smooth functioning of markets.

Furthermore, the Commission's role is not to protect individual competitors but rather to protect and promote competition. As a result, the Commission's mandate does not call for it to come to the assistance of or to protect a particular individual, group or company having a difficult time as a result of acceptable competitive tactics by competitors in the marketplace. No one should expect therefore that a report such as this will recommend protection or special advantages for particular participants facing legitimate competition.

Competition may mean very different things to different people, and unless care is taken to use the word precisely, it can frustrate communication and obscure analysis. *Price competition*, in the sense in which it is something in the public interest, represents a *process* by which prices are set. The actions by business rivals place an upper limit on the prices a firm can charge for its products. More importantly, such actions by rivals continuously pressure a firm to lower its costs in order that the highest prices the market will permit it to charge enable it to earn a sufficient return on investment to attract investors. This market condition requires that competitors continuously seek to attract business away from each other by price and other means and in turn, this usually requires a reasonable number of competitors. In competitive markets the prices of the various competitors inevitably tend towards the same levels because all available cost-saving techniques will be adopted by all the (surviving) competitors.

This is very different from saying that if prices of the firms in the market are approximately the same they are therefore, for that reason, "competitive" prices, and yet, on many occasions throughout the inquiry witnesses used the word "competition" in this superficial sense. Such a limited concept, characteristic of persons satisfied with "established" market shares, means only that the company prices at a level that prevents others from taking away its business. There is little or no striving for improvement in this concept of "competition"; it characterizes stagnant behavior by someone who merely wishes to preserve an established position, and implies a power and ability to set one's own prices with less regard for pressures from others than would be in the public interest. There are no, or at least insufficient, downward price pressures on costs.

Competition means therefore an effective functioning of markets which promotes and requires rivalry amongst competitors for the business of consumers. An effective functioning of markets also permits smaller competitors to expand if they meet the test, and the entry of new competitors and new ideas. Technological change and innovation are the large levers of competition in industry. They are sources of creative destruction by which monopolies or inefficiencies are destroyed and new entrants and greater efficiency are encouraged.

Nor does the proper meaning of "competition" leave room for notions about "fair" price levels. Businesses are not entitled to "fair" prices or to "satisfactory" profits. If they are relatively innovative, or reduce costs sufficiently, there will be a sufficient margin between the highest price the market will permit them to charge and their own costs that they will deservedly earn large and even very attractive profits. They are entitled to those prices and profits until others enter, perform as well or better and compete those profits to lower levels. Those who cannot make the grade on a continuing basis leave the industry. Consumers do not owe them a sinecure. This is the basic function of prices and profits and the way in which they allocate resources in a market economy. It is, of course, dependent upon the elimination of unjustifiable barriers to entry.

Similarly, consumers are not entitled to "fair" price levels, but only to prices set by a competitive process. The latter clearly are in the best interest of consumers.

Finally, an inquiry and particularly a public inquiry, quite understandably, can give rise to a host of issues and a long list of complaints. Many of these may have little or nothing to do with competition and hence are not relevant to the Commission's mandate. For example, it is not the Commission's role to settle a specific contract dispute between a buyer and a seller or a particular dispute between a landlord and tenant. In Chapter III the Commission indicates, from amongst the breadth of concerns and recommendations presented to it during the inquiry, the relatively few that it considers to lie outside its mandate.

Before moving to other sections of the Report and to its Conclusions and Recommendations, the Commissioners considered it would be helpful to provide the reader with a brief layman's overview of the Canadian petroleum industry and then to outline the concerns and views of participants.

II

An Overview of the Industry

1. Introduction

The purpose of this "Overview" is to introduce the "lay" reader to the petroleum industry in Canada as background to the issues examined in the Commission's Report. The stages of production and distribution in the industry and their geographic location in Canada are described together with the relationship of the Canadian industry to the international industry and the evolution of domestic government policies, many of which have been introduced and amended in response to international pressures. Throughout this description an attempt is made to highlight the main industry trends. More specific industry, market and firm data are dealt with in the body of the Report. This chapter presents the canvas on which these details are painted.

The Canadian petroleum industry encompasses the exploration for crude oil and other hydrocarbons, their production, transportation and refining as well as the marketing of refined petroleum products in Canada such as gasoline, diesel and heating oil. Each of these sectors is somewhat unique in terms of the physical production process, the methods of distribution, the product's end use and the market forces that affect distribution. The principal end uses of petroleum products are as energy for transportation, for generating electricity and driving industrial machinery, for home and industrial heating, and in the manufacture of petrochemicals, lubricating oils and asphalt.

An important characteristic of petroleum products is their relative homogeneity. For example, most consumers are indifferent as to the brands of gasoline used in their cars or heating oil used in their homes. This has allowed refiners to distribute gasoline and heating oil under their own brand names, and at the same time, to supply products from the same tanks both to competing refiners under exchange agreements and to marketers who then distribute them under their own brand names. In short, gas is gas. This little explored aspect is addressed in Chapter XIII.

Parts of the Canadian petroleum industry are highly concentrated with a small number of firms accounting for a large share of the market. Most of the larger firms are vertically integrated with firms operating in more than one sector of the industry from the exploration for crude oil to the distribution of refined petroleum products. The level of concentration does, however, vary by industry sector, being highest in trunk pipelines and refining. A concern of public policy is that this combination of vertical integration and high concentration, which has emerged at least partly for reasons of efficiency in production and distribution, results in market power that can have adverse effects for consumers and society.

Numerous firms participate in the industry as crude oil producers, refiners and distributors. The largest and most widely known firms are the eleven refiners[1], the majority of whom are wholly or significantly foreign-owned, namely:

Company	**Foreign Shareholder**
Chevron Canada Limited	Chevron Corporation
Consumers' Co-operative Refineries Limited	
Husky Oil Operations Ltd	
Imperial Oil Limited	Exxon Corporation
Irving Oil Limited	Chevron Corporation
Petro-Canada	
Shell Canada Limited	The Royal Dutch Shell Group of Companies
Suncor Inc.	Sun Company, Inc.
Texaco Canada Inc.	Texaco Inc.
Turbo Resources Limited	
Ultramar Canada Inc.	Ultramar PLC

All 11 firms are integrated forward into marketing, and many are integrated backwards into crude oil exploration and production as well. Smaller firms also participate in the crude oil production and marketing-distribution sectors of the industry.

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[1] Petrosar Limited, owned by the Federal Government, operates a petrochemicals refinery in Sarnia, Ontario. It produces some gasoline and heating oil as byproducts of petrochemical production.

The trunk pipeline systems, carrying Canadian crude oil eastwards and westwards from Alberta, are owned respectively by Interprovincial Pipe Line Limited and Trans Mountain Pipe Line Company Ltd., each of which is partially owned by some major refiners.

2. Stages of Production and Distribution

The various sectors of the industry from crude oil production through refining to marketing and end use are shown in Figure 1. Transportation and storage facilities link the sectors with pipelines, ships, railroad tank cars, trucks and related terminal facilities. Crude oil exploration and production are the "upstream" activities, while the refining and marketing of petroleum products constitute "downstream" operations. The economic structure of each sector varies. There are more producers "upstream" than in refining, due primarily to scale economies in refining which limit the number of efficient size plants needed to supply the Canadian market. Marketing is undertaken through numerous wholesale and retail outlets such as gasoline stations and heating oil distributors, but many of these small business operations are either owned by or tied to refiners through complex franchise agreements and other supply arrangements.

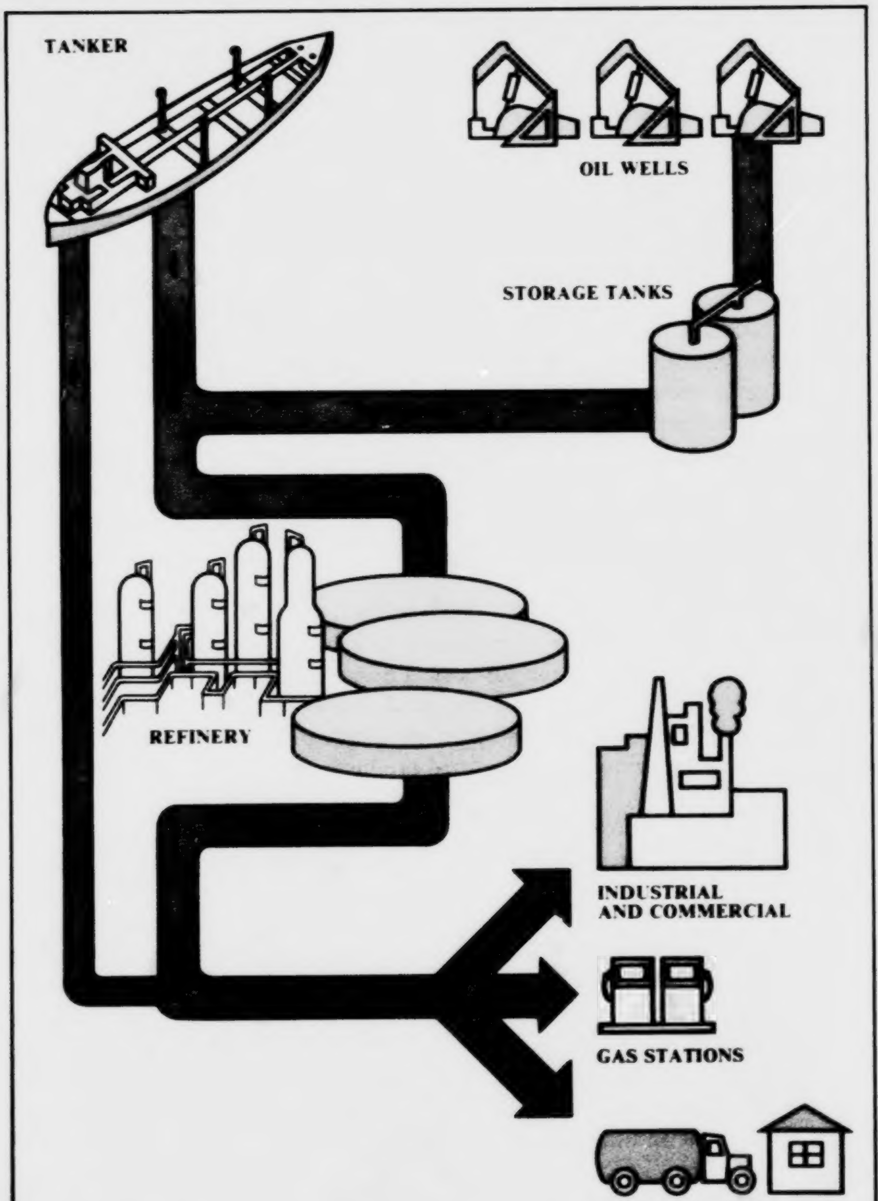
Scale economies in operating a pipeline similarly dictate the need for only a few operating companies in Canada and thus high concentration in order to provide efficient transportation services. The overall structure of the industry might be thought of as an hourglass; crude oil flows from many producers through a few firms owning trunk pipelines and refineries and out to a larger number of firms distributing the refined products.

The upstream sectors of crude oil production and pipelines are partially tied to the needs of the domestic industry and partially to export markets in the U.S.

The "upstream" and "downstream" sectors handle liquids, which must be contained from the time they leave underground storage in oil wells or deposits, until they arrive as manufactured products at the end users' storage facilities, such as the gas tanks of cars, trucks, ships, planes and trains, or the heating oil tanks of homes, offices and factories. There is clearly a limit to the amount of liquid that can flow through the system at any one time, and the installation of additional capacity takes time.

The successive stages of flow from crude oil production through to product marketing need to be coordinated in order to optimize capacity utilization throughout the system as a whole and to reduce operating costs.

FIGURE II-1.
Stages of Production and Distribution


TANKER
OIL WELLS
STORAGE TANKS
REFINERY
INDUSTRIAL AND COMMERCIAL
GAS STATIONS
HOME HEATING

Coordination is undertaken either by purchases and sales between independent firms, or by internal decisions made by vertically integrated firms.

3. Location and Industry Trends

The "upstream" industry is located primarily in Western Canada, with about 85 per cent of Canada's annual crude oil production occurring in Alberta over the past decade. More recently, extensive exploration and production has been taking place in the Arctic and offshore in Eastern Canada. The "downstream" refining segment of the industry is spread across Canada.

(a) Crude Oil Production and Reserves

Prior to the Leduc, Alberta discovery by Imperial Oil in 1947, there was relatively little crude oil production in Canada and refineries were supplied mainly with imported crude oil. Thereafter, domestic production of conventional crude oil expanded rapidly in the 1960s and 1970s reaching a peak of 635 million barrels in 1973 before declining to 465 million barrels in 1984, a decrease of 27 per cent from a decade earlier. Additional production comes mainly from synthetic (tar sands) crude oil and reached about 50 million barrels in 1984. Total production reached 515 million barrels or 1.4 million barrels per day in 1984, less than estimated production capacity of 1.5 million barrels per day and reflecting shut-in or unused capacity.

The estimation of Canada's oil reserves is difficult to forecast because of changing costs, prices and policies, uncertainty about future discoveries and the variety of crude oil sources. In addition to reserves of conventional and synthetic crude oil, some oil is produced as a by-product of processing natural gas. Some light oil can be produced by upgrading heavy oil as in the proposed Lloydminster and Cold Lake thermal recovery projects. Discoveries have also lead to reserves in frontier areas such as the Hibernia offshore field in Eastern Canada, the Beaufort Sea and the Arctic Islands.

The National Energy Board (NEB) forecasts that productive capacity will be marginally lower in 1995 (1.4 million b/d) relative to 1984 (1.5 million b/d). The relative importance of different sources of crude oil will change with synthetic crude oil, frontier production and light oil produced from upgrading heavy oil, being much more important in 1995 than in 1983. Correspondingly, conventional crude oil, which accounted for 83 per cent of productive capacity in 1983, is forecast to account for less than 50 per cent of capacity in 1995 as reserves of conventional crude oil dwindle, even assuming some further discoveries.[2]

(b) Pipelines

In 1984, Canada had a pipeline network consisting of almost 40,000 kilometres of trunk, gathering and product lines. The main expansion of the network took place up to 1980. As illustrated on the map inside the back cover of this Report, major crude oil pipelines ship Alberta crude oil westwards to Vancouver via the Trans Mountain Pipe Line, and eastwards to Ontario, and more recently into Quebec, via the Interprovincial Pipe Line. Offshore crude oil is imported into Eastern Canada by tanker and through Portland, Maine, by pipeline to Montreal. As well, there are product pipelines, such as the Trans-Northern Pipe Line linking Toronto, Montreal and Ottawa, two pipelines between Sarnia and Toronto, and the Alberta Products Pipe Line between Edmonton and Calgary. An Interprovincial pipeline formerly used to ship crude oil is now used to ship products. The conversion of the Interprovincial line allowed some refineries on the Prairies to be closed and many Prairie markets to be supplied with refined products by pipeline from Edmonton. A similar situation could develop in the future in B.C. with the closure of Vancouver refineries and the shipment of products from Edmonton. At present the Trans Mountain Pipe Line carries products mixed in batches with crude oil from Edmonton as far as Kamloops.

(c) Refining

The location of Canada's 25 operating refineries in 1985, as well as those closed in recent years, are shown on the map at the back of this volume.[3] Some refineries are located close to crude oil supplies, as in Alberta. Others, in the Atlantic region and Quebec, are situated on tidewater and accessible to tankers. A third group, mainly in Ontario and near Vancouver, are supplied with crude oil by pipeline from Western Canada and are located close to large product markets. Two refineries now mothballed, at Point Tupper, Nova Scotia and Come-By-Chance, Newfoundland, were built primarily as export platforms using imported crude oil and exporting largely bunker fuel to the U.S.A. Conditions in the U.S. market led to their demise.

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[2] There is no unqualified statement that can be made about how long Canada's oil reserves will last. A clear discussion of the issues can be found in the Economic Council of Canada's *Connections, An Energy Strategy for the Future* (Ottawa, Minister of Supply and Services, 1985), pp. 27-36.

[3] Not included in the 25 are two asphalt refineries, one owned by Petro-Canada at Moose Jaw, the other owned by Husky at Lloydminster, and Petrosar's primarily petrochemical refinery.

Canadian refining capacity increased two and half times between 1950 and 1960, and then again between 1960 and 1980 with the increased demand for petroleum products. This expansion was fed by the increased availability of domestic crude oil supplies, due in part to the Federal Government's National Oil Policy. This was followed by a decline in demand and by the closure of several refineries amounting to a decline of 13 per cent in capacity by 1984. The number of refineries grew from 31 in 1950 to 44 in 1960, and then declined to 25 in 1985. Over time, the average refinery size in Canada has increased as smaller refineries have been closed and larger ones built.

The utilization rate of refining capacity in Canada averaged over 85 per cent from 1950 to 1980. In the 1980s the rate has fallen, averaging 75 per cent for the years 1982 to 1984. Lower utilization has occurred despite the closure of 10 refineries since 1982, representing over 375,000 barrels per day or 18 per cent of Canada's 1982 refining capacity. The most recent refinery closure, that of the Gulf refinery in Montreal in 1986, has raised particular questions about the adequacy of petroleum product supplies, including heating oil, in the Province of Quebec. This issue is addressed by the Commission in Chapter XIX. It may be noted however, that Canada is not alone in experiencing refinery closures; it is estimated that about one third of global refining capacity has been closed in recent years.

(d) Consumption – Prices and Products

Petroleum products are consumed in one way or another by all Canadians. Major changes occurred in consumption patterns in Canada and elsewhere as crude oil prices rose sharply in the 1970s, and further changes can be expected as prices continue to fluctuate.

Oil consumption rose in Canada between 1950 and 1980. However, with the sharp oil price increases in the 1970s, other forms of energy were increasingly substituted for petroleum products. As well, overall demand for crude oil was depressed following the recession of 1981.

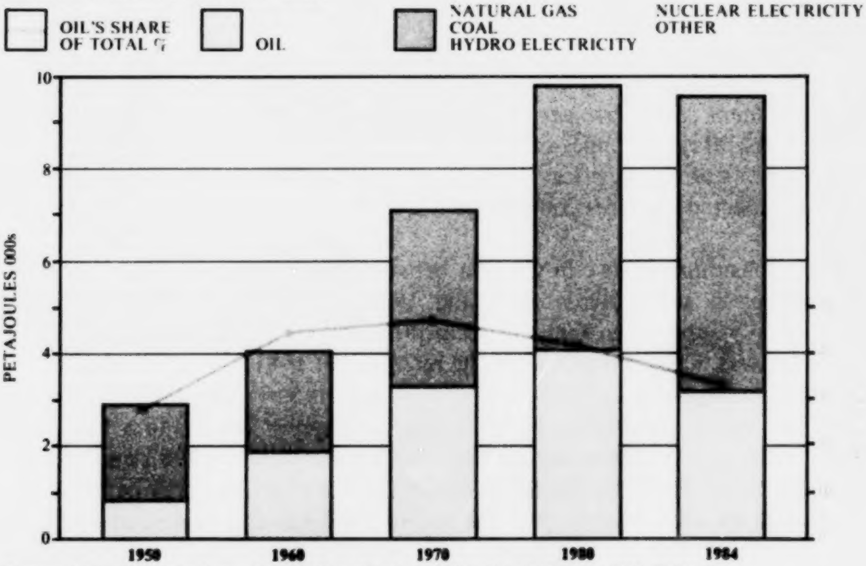
Total energy consumption in Canada rose almost three and a half times from 1950 to 1980, then declined by about 6 per cent by 1983 and in 1984 was still below the 1980 peak. Petroleum's share of total energy consumption reached a maximum of 48 per cent in 1965 and has since declined to 33 per cent in 1984. As shown in Figure 2, in absolute terms Canadian petroleum consumption reached a peak in 1979, and fell by almost a quarter by 1984.

Changing product demand led to changes over time in the yield of refinery products. In recent years, the main trends have been the increasing relative importance of motor gasoline and diesel at the expense of fuel oils (Figure 3). Conservation and the substitution of non-petroleum products such as natural gas, electricity and even wood for heating, have been responsible for changes in the slate of products produced.

Until 1950, Canadian refineries were heavily dependent on imported crude oil. Subsequently this changed and by 1984 Canadian produced crude oil accounted for 83 per cent of Canadian refinery feedstocks, compared with 24 per cent in 1950 and 9 per cent in 1947. Imported crude oil was replaced in most of Ontario by Western Canadian crude oil under the National Oil Policy instituted in 1961, after which imports supplied only markets east of the Ottawa Valley line. Canada has also been an exporter of crude oil, mainly to the U.S., and at various times has been both a net importer and a net exporter of crude oil and refined products.

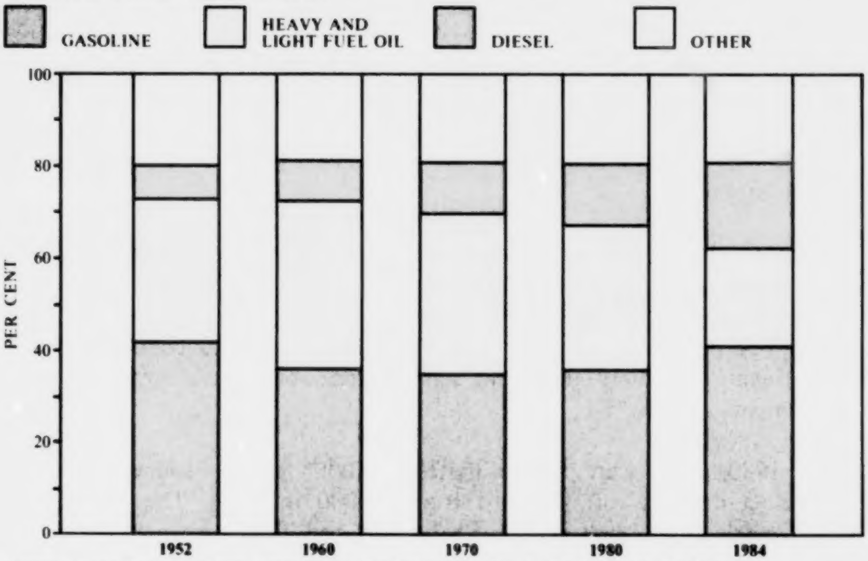
Two dimensions of the price of crude oil need to be considered, the absolute price level and the price of crude oil in Canada relative to the international price. The Canadian industry has had to respond to both

FIGURE II-2.
Canada — Energy Consumption By Source,
Selected Years, 1950 to 1984



Source: Canadian Petroleum Association, *Statistical Handbook*, Section VII, Table 4.

FIGURE II-3.
Canada — Yield of Refinery Products By Volume,
Selected Years, 1952 to 1984



Source: Canadian Petroleum Association, *Statistical Handbook*, Section VIII, Table 7.

aspects of prices. Prior to the early 1970s Canadian oil prices exceeded international prices. International prices then rose much faster than Canadian prices due to the actions of the OPEC cartel and restraining actions taken by the Canadian Government. By 1980 the Canadian price of oil was well below the international price. However, during the 1980s Canadian prices were allowed to approach international prices. The two were roughly equal by 1985, and the present price changes in Canada and abroad are taking place from similar levels. One of the reasons for the lack of synchronization of conditions in the Canadian and international oil markets has been government policies which have at times protected Canadian producers from lower priced imports, while at other times protecting consumers in Canada from higher domestic prices.

The more familiar price to Canadian consumers is the price at the gas pump. The average retail price of regular leaded gasoline in Canada climbed from 11¢/*l* in 1971 to 16¢/*l* in 1975, to 26¢/*l* in 1980 and to about 55¢/*l* in January 1986, a more than threefold increase over the past decade. Gasoline prices vary by province, tending to be highest in Newfoundland and lowest in Alberta, due in part to differences in provincial consumption taxes.

(e) Distribution – Gasoline and Heating Oil

There have also been substantial changes in the methods of distributing petroleum products, especially gasoline. Some of these changes are of an organizational nature altering the way in which gasoline is sold and the types of contractual relationships between refiner and retailer. The similar external appearance of gasoline stations hide the many different contractual links affecting the station operator. Changes in the service and maintenance requirements of automobiles have also profoundly affected the operations of gasoline stations.

The importance of the retail gasoline market is evident from the fact that motor gasoline accounted for 42 per cent of refiners' volume of petroleum product sales in 1984. Most of the gasoline was sold through retail gasoline outlets (84 per cent) with the remaining sales going to commercial and institutional customers including agriculture, commercial transport and government.

In 1980 there were approximately 24,000 retail gasoline outlets in Canada, a decrease of one-third from 36,000 in 1970. The four major refiner/marketers[4] (Imperial Oil, Shell, Gulf and Texaco) accounted for 59 per cent of the outlets in 1980, down from 64 per cent in 1970. The decreased number of outlets and the increased demand caused the average annual volume of gasoline sold per outlet to more than double from 600,000 litres in 1970 to 1.3 million litres in 1980.

Retail outlets "fly the flag" of either a refiner who markets across the country, a regional refiner, or an independent marketer,[5] including cross-merchandisers. The acquisition of three regional refiners by Petro-Canada since 1979 created a fifth major, joining Imperial Oil, Shell, Gulf and Texaco. With Gulf's sale of its downstream assets west of Quebec to Petro-Canada in late 1985, the number of national integrated firms or majors has again been reduced to four.

In the last 20 years or so the changes in the retail gasoline market have included the introduction of second brands by most refiner/marketers, an increase in the number of outlets directly operated by refiners, the development of self-service outlets, a reduction in the price differentials for gasoline as between the majors and the independents, the closure of many gas stations, and increased cross-merchandising of gasoline with other products and services. The joint marketing of gasoline and automobile repair services has greatly declined.

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[4] "Major" is sometimes used in the Report to refer to all refiner/marketers in order to distinguish them from unintegrated marketers or independents. On occasion the term major is used to refer to the national majors and the remaining refiner/marketers are referred to as "regional refiners".

[5] The term "independent" is used in this Report to refer to an unintegrated marketer selling under his own brand.

The refiner/marketers and the independents have experimented with various marketing techniques. In the 1950s and 1960s the typical gasoline station owned by a refiner/marketer was a relatively low volume outlet with pump-island service plus maintenance and repair facilities. Independents began to enter the market in a significant way in the 1950s. Most did so on the strength of prices lower than those available from the refiner-branded outlets. Their approaches varied from "no frills" gas bars to the large scale cross-merchandising of gasoline with automobile repairs and the sale of automobile parts as in the case of Canadian Tire. Refiners responded by introducing various offerings including car washes, large diagnostic and repair facilities and second brands.

Later, in the mid-1970s, the refiners expanded the number of self-serve outlets. By 1980-1981, the proportion of major refiners' outlets that were self-serve varied between 10 and 26 per cent, accounting for 30 to 47 per cent of the total major brand retail sales.

Refiners also increased the extent of their influence in retail markets through consignment, other dealer support programs[6] and agency arrangements. The increased direct participation of refiners in retail marketing has been of concern to both the refiners' dealers and to independent marketers. So-called "dual distribution" by refiners, whereby they are both suppliers to and competitors of dealers and independents, has raised a number of issues in the inquiry. These include the terms under which the refiners make supplies available to various classes of customers, and the degree of control exercised by refiners over their customer/competitors through the use of measures such as consignment selling and support programs. In addition to vertical integration through refiners owning gas stations, various forms of quasi-vertical integration are created through certain types of refiners' supply relationships with other customers.

Households and industrial and commercial users of heating oil are another important market for petroleum companies. Unlike gasoline, for which substitutes of propane or natural gas are only economically feasible for large volume users, heating oil faces substantial competition from natural gas, electricity and other energy sources. In Western Canada natural gas is used almost exclusively in place of heating oil, and so the observed market trends arise largely from changes which have taken place in Eastern Canada. For example, the sales of light fuel oils in Eastern Canada declined from 105.4 M barrels in 1970 to 47.8 M barrels in 1984, a drop of 55 per cent. During the same period, the proportion of Canadian homes heated by oil declined from 58 per cent to 25 per cent, while that of natural gas rose from 33 per cent to 44 per cent and that of electricity, from 4 per cent to 25 per cent. These changes have been due to a combination of changes in relative prices and government policies encouraging conservation and substitution away from fuel oils.

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[6] "Support" refers to changes in "normal" wholesale prices that provide branded dealers, and occasionally independents, with a minimum margin.

The shrinking market for heating oils in Eastern Canada has been accompanied by a decline in the number of heating oil distributors. For example, in Quebec, between 1977 and 1982, 422 local private brand distributors were either closed or acquired. The market share of independent heating oil distributors in Quebec has declined from over 40 per cent in 1978 to around 20 per cent in 1984, while in Ontario the drop has been somewhat smaller. Thus, the declining heating oil market has been associated with a larger market share of a diminishing market for major brand or refiner distributors.

4. International Dimensions

The petroleum industry is a multi- or supranational industry. It represents a high proportion of international trade and investment. The actions of foreign governments can have, and indeed have had, considerable impact on producers and consumers in Canada and in other countries. Over time, firms in the upstream and downstream sectors in Canada, as well as governments, have had to adjust to pressures emanating from outside the country. Canada can only isolate itself from these pressures if it is willing to adopt buffering policies which in turn will affect prices.

In 1983-1984, Canada had about one per cent of estimated world proved crude oil reserves, and about 2.5 per cent of world crude oil production, refining capacity and oil consumption. In 1983 Canada became a net exporter of crude oil for the first time since 1974, with net exports accounting for 2.8 per cent of crude oil production. In refined petroleum products Canada has been a net exporter since 1974, at about 48,000 barrels per day (b/d) in 1984. Although the volume of Canada's trade in both crude oil and refined products is small relative to world totals, both have been important to the industry in Canada. Crude oil imports have been a major source of supply for refineries in Eastern Canada, while exports to the U.S. have generated earnings for crude oil producers in Western Canada. The United States has also been the destination for product exports, and the loss of markets in the Northeastern U.S. in the 1970s was largely responsible for two refinery closures in Eastern Canada. At different times, American energy policies have encouraged and discouraged petroleum industry developments in Canada.

International investment, in addition to trade, links the Canadian industry to outside influences. Foreign investment occurs in both the upstream and downstream segments, and is high in refining where in 1985 about 60 per cent of capacity was owned by six foreign-controlled firms, with almost half of a seventh, Irving Oil Ltd., being owned by Chevron Corporation. Canadian Government-owned Petro-Canada is now the second largest refiner with 23 per cent of Canadian refining capacity. Its entry and acquisitions since 1979 have sharply reduced the level of foreign ownership in the Canadian refining industry.

Foreign ownership has been associated with pricing questions where firms in Canada make purchases from affiliates abroad. Transfer prices pose a problem for tax authorities and can have implications for the competitive positions of Canadian firms. However the availability of imported crude oil and refined products can provide strong disciplining pressures on Canadian markets provided that there are no tariff or non-tariff barriers to imports, and no other barriers growing out of the structure of the industry.

5. Government Policies

The environment of the industry has been shaped in large measure by government policies. Government regulations apply to crude oil production, pipelines and in some areas marketing, and many government initiatives have involved a trade-off against the forces of competition. For example, at times crude oil imports have been restricted to provinces east of Ontario, and at other times lower compensation has been paid on imported refined products than on crude oil. Policies to achieve greater domestic security of oil supply, greater use of Canadian oil or the protection of Canadian jobs often mean subsidizing and protecting domestic firms at the expense of competition.

The evolution of Canadian government policies can be traced over time. Prior to the Leduc oil discovery in 1947, there was little reason for governments to become involved in the Canadian petroleum industry other than to provide incentives for exploration. Following significant crude oil discoveries in Alberta, the Provincial Government imposed prorationing controls to regulate drilling and production in order to prevent inefficient production and a waste of resources and to allocate limited sales among producers.

The industry changed as domestic crude oil production began to account for an increasing share of Canadian requirements. The problem then for policy makers was to balance the interests of Canadian crude oil producers with those of consumers who could be supplied either through imports, which at times were cheaper, or from domestic production.

During the 1950s, increasing supplies of cheap crude oil from the Middle East led to protective measures for North American producers. The United States imposed voluntary (1955) and then mandatory (1959) crude oil import quotas in the name of national security. A U.S. Cabinet task force stated that crude oil imports should be limited to maintain "domestic production needed for projected national defense requirements and the capacity of the U.S. to meet national security requirements".

Canada followed suit with its National Oil Policy (NOP) in 1961 which had the effect of reserving the western Canadian market and most of Ontario for Canadian crude oil, while Quebec and Atlantic refineries were allowed to import their requirements. The NOP also served to maintain access for Canadian crude oil to the U.S. in that voluntary export quotas to U.S. markets were set by the two governments. However, in practice, Canadian export sales greatly increased and usually well surpassed the voluntary limits established for Canadian sales, especially to the U.S. midwestern market.

After 1973, the international market for crude oil sharply changed, and the measures taken by OPEC raised the international price of crude oil. Canadian crude oil prices fell below world prices and, instead of needing protection, producers could raise prices and still compete strongly through most of Canada and the Northern U.S. markets. However, after 1973 the Federal Government shielded Canadian consumers from the impact of rising crude oil prices by a combination of three measures: controlling the price of crude oil sold in Canada; paying compensation to Eastern Canadian refiners who still relied on imported, now high cost, crude oil; and placing an export tax on crude oil exported from Western Canada to the U.S. so that Canada, as a producer and exporter of crude oil, would benefit from the higher international prices.

In 1976, Petro-Canada was established as a state-owned enterprise to provide government with a window on the industry, and to increase the presence of Canadian-owned firms in the industry. A further layer of policies was added in 1980 with the introduction of the National Energy Program (NEP) the nature of which is outlined in the following chronology.

Chronology of Main Federal Petroleum Industry Policies in Canada

1957 (Borden) Royal Commission on Energy established.

1959 Report of the Royal Commission on Energy published.

National Energy Board (NEB) established under the National Energy Board Act with power to license pipelines crossing provincial borders, as well as petroleum imports and exports.

1961 National Oil Policy (NOP) introduced; area west of the Ottawa Valley reserved for Canadian crude oil.

1970 Mandatory controls on gasoline imports introduced, lasting until October 1973.

1973 NOP terminated. Government announces 60 day freeze on the price of Canadian produced crude oil. Government controls on the price of crude oil at the wellhead and on the prices of petroleum products begins and extends to June, 1985.

Oil Export Tax Act passed, introducing a crude oil export tax to equate the price of Canadian crude oil exports with that of other foreign crude oil sold to the U.S.

1974 Oil Import Compensation Program introduced in order to subsidize cost of imported crude oil and products.

1975 Petroleum Administration Act, an umbrella regulatory act, (subsequently called the Energy Administration Act) introduced.

1980 National Energy Program (NEP) introduced with three objectives; 1) security of supply through independence from the international market; 2) increased Canadianization of the industry through domestic ownership, and 3) fairness in the determination of prices and allocation of revenues.

NEP policies included:

1. A federally imposed schedule providing for a gradual increase in the domestic price of oil towards the international price.

2. The Petroleum & Gas Revenue Tax.
3. The Petroleum Compensation Charge.
4. The Canadian Ownership Special Charge.
5. Incentives to encourage consumers to substitute away from oil and to conserve energy.
6. Direct subsidies for exploration and development activity, the Petroleum Incentive Payment, to replace depletion and super-depletion allowances. Preferential treatment is given to firms based on their degree of Canadian ownership, and to exploration offshore and in the Territories (Canadian lands).
7. Provision for Petro-Canada to purchase one or more large subsidiaries of foreign petroleum companies with assistance from the Canadian Ownership Special Charge.
8. Reservation for the Crown of a 25 per cent interest in development on Crown lands, including discoveries prior to 1980 (the back-in provision).

1981 Agreement reached between the Federal and Alberta Governments for a schedule of oil price increases.

1985 The Atlantic Accord between the Federal Government and the Government of Newfoundland creates an equal partnership in the development of offshore resources.

The Western Accord between the Federal Government and those of the three Western provinces to remove crude oil price controls, to allow the price to follow world prices from June 1st, 1985, and to allow the immediate or phased removal of various energy taxes and levies, effectively abolishing the NEP.

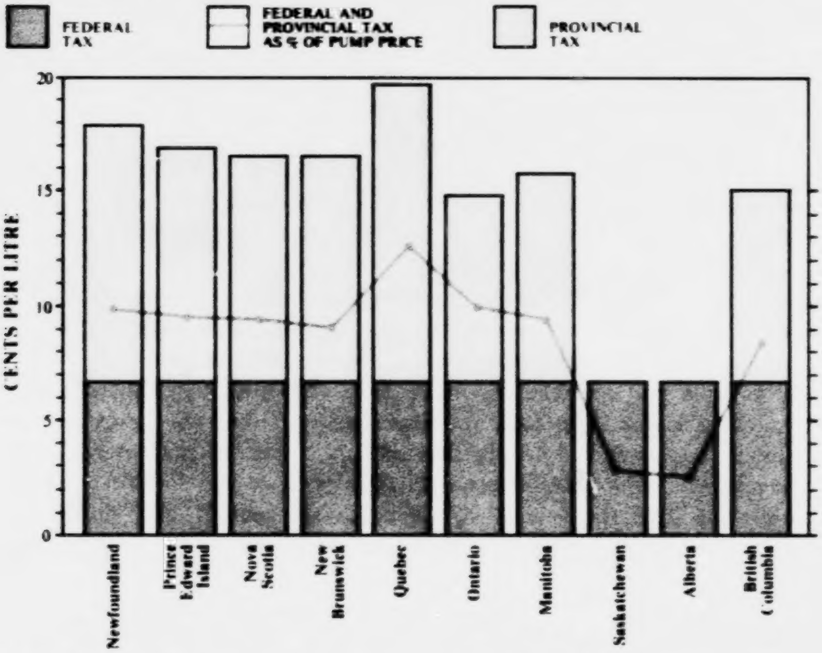
In 1985, deregulation of domestic crude oil prices and related aspects of the industry occurred with the Atlantic and Western Accords between the federal and certain provincial governments, limiting the pervasiveness of formal government intervention.

A chronological listing of major policy developments is of more than historical interest. The web of policies reveal the conditions within which competition in the industry has had to operate. The domestic and international pressures which gave rise to many of these policies are still present, although in different forms. In recent years surplus refining capacity around the world has intensified competition in international product markets thereby making the option of importing products into Canada more attractive.

Energy taxation is a field of government policy which is almost an industry in itself. Governments have found oil to be a lucrative source of revenue and have not lacked in imagination in devising revenue raising measures. The effects of taxation are difficult to disentangle and not surprisingly are poorly understood by the public. No attempt is made in this Report to sort out these effects beyond recognizing their existence and the difficulties of interpretation which arise. It is difficult to sort out the effect of taxes on product prices. The taxes paid by petroleum companies fall into three broad categories. First, there are corporate profit taxes and local taxes, to which firms in all industries are subject. These will affect oil prices, but in principle no more and no less than those in other industries. A second group of taxes is related to attempts by governments to take advantage of the fact that there has been a positive difference between the market value of crude oil (and natural gas) and the cost of finding and producing it. Taxes are levied in other natural resource industries as well, but the taxes in the petroleum industry are tailored to the industry's specific character. These taxes do not affect the price of crude oil, the price of which is determined internationally. The third level of taxes covers federal and provincial consumption taxes. All, or almost all of the total amount of these taxes would be reflected in prices paid by consumers.

Gasoline, diesel, aviation fuel, and propane when used as a motive fuel, are taxed by the Federal Government and by most provincial governments. In October 1985, the Federal Sales and Excise Taxes on regular leaded gasoline amounted to 6.8 ¢/*l*, while the provincial taxes varied by province, from zero in Alberta and Saskatchewan to 12.9 ¢/*l* in Quebec. (That portion of the provincial road taxes which replaces general provincial sales taxes, and the federal sales tax, are not of course, unique to petroleum products.) The result is that the above federal taxes plus provincial consumption taxes as a percentage of the pump price of regular unleaded gasoline varied from about 15 per cent in Alberta and Saskatchewan to over 34 per cent in Quebec — Figure 4.

FIGURE II-4.
Consumption Taxes on Regular Leaded Gasoline
By Province, October 1985



Source: Energy, Mines and Resources, *Petroleum Utilization Highlights*, Oct. and Nov. 1985.

III

A Summary of Concerns and Views

1. General Public Concerns

Before summarizing the various concerns and views expressed directly to the Commission in evidence or formal submissions, it may be helpful to note the nature of the principal recurring concerns of the general public as they appear to the Commissioners from their review of general media coverage of the industry.

The most frequently expressed general public concerns and apprehensions relate primarily to retail gasoline prices and may be summarized as follows:

1. The absolute level of prices is too high. (This concern is increasingly expressed in conjunction with a comparison of Canadian retail gasoline prices with those in the United States or with the price of crude oil on world markets.)
2. Pump prices are nearly identical for comparable grades of gasoline at stations that are adjacent or neighboring, and leave little room for consumer choice.
3. In those areas of the country where pump prices fluctuate, they tend to edge downward over a period of weeks but then suddenly increase very significantly within a matter of hours at all outlets, and sometimes just prior to peak demand periods such as holiday weekends.
4. Significant differences in pump prices exist from time to time between neighboring communities, and some areas experience greater ongoing volatility of pump prices than do others.

For want of a better explanation of the probable cause of these various phenomena, it is not surprising if members of the public adopt the occasional speculations of reporters, politicians or others to the effect that price fixing or other illegal, cooperative or manipulative action is the probable cause, or for concluding that in any event all cannot be well in the functioning of the gasoline market. Persons who read this report will realize, however, that there can be other explanations for the above phenomena. It may further be noted that the Director has at no time alleged that the voluminous evidence tendered by him or by others to the Commission shows that a criminal offence has been committed by anyone.

2. Consumers' Associations

The Commission received submissions from the national office of the Consumers' Association of Canada ("CAC") and, in addition, from the CAC branch offices in each of British Columbia, Alberta, Saskatchewan, Manitoba, Nova Scotia and Toronto. Several of the submissions were supported by surveys of consumer experiences and views.

The basic concern of the consumers' associations is that there is insufficient price competition and too few alternative offerings in the retailing of gasoline in Canada. They are of the view that the insufficiency of competitive rivalry results from too high a degree of concentration and too much vertical integration, both of which have resulted in too much market power for the major oil companies at the retail level. They are concerned that the majors have the power to exclude or constrain independents by means of lower priced supply to retail outlets (particularly self-serve) that are owned and operated by the majors themselves. They are also concerned that government regulation in certain provinces and municipalities which restricts entry and the range of retail offerings (e.g. by restrictions on self-serves, gas bars and extended hours of business) exacerbates this condition. Overall, the consumers' associations are of the view that there are too few distinct enterprises engaged in the retailing of gasoline, too many stations resulting in too low average volumes and too high unit costs, and, in some markets, insufficient alternative offerings.

Perhaps because of the system of provincial regulation in Nova Scotia, the Nova Scotia branch of the CAC was particularly strenuous in urging the elimination of regulatory restrictions on the number and types of retail offerings. Further, it felt that dealer margins should not be propped up by regulation because inefficient stations were thereby preserved.

In general, the consumers' associations were concerned that the effect of provincial and municipal government regulation was to diminish retail competition to the detriment of the consuming public.

The consumers' associations also strongly recommended that retail gasoline outlets be required to post the pump prices of all grades of gasoline sold at the outlet, and in a manner that the prices are clearly visible from the street. They felt that this was important to the making of informed consumer choices. (The practice of posting pump prices became common in the industry shortly after the regional hearings where these submissions were made.)

The Saskatchewan branch of the CAC proposed to the Commission that discounts for cash should be required to be given by gasoline outlets that also accept credit cards.

3. The Director of Investigation and Research

As with the other summaries in this chapter, the summary below attempts to capture the essence of the Director's views without reciting the detail on which those views were based.

The Director's assessment of facts and of the state of competition in the Canadian petroleum industry differed somewhat at the conclusion of the Commission's hearings from the views he had expressed in his Green Book. His recommended remedies also changed. Although the broad thrust of the Director's views remained largely unaltered over the course of the Commission's hearings, it may nevertheless be helpful to note the principal respects in which his views as expressed in the Green Book in 1981 were subsequently modified.

(a) Sourcing of Crude Oil

For reasons of availability and price, refineries in Eastern Canada have historically obtained most of their crude oil from abroad rather than from Western Canada or the United States. In the Green Book, which focused primarily on the period 1958-1973, the Director concluded from his private investigation that the eastern Canadian refiners, who imported crude oil almost exclusively from their international affiliates (who in turn, as multinational oil companies, produced the crude oil from their Venezuelan, Middle East or other concessions) paid "artificially high prices" for the crude oil. In the Director's view these artificially high prices were made possible by control by the multinational oil companies over crude oil exports to Canada, by a measure of "harmonization" of price levels as between the majors, and by their retail market power in Quebec and the Maritime provinces. The latter, in the Director's submission, permitted a pass-on of the "unrealistic" crude oil import prices in the form of higher product prices and thereby diminished downward competitive pressures on upstream costs.

As for the supply of domestic crude oil from Western Canada, the Director was critical of both the integrated oil companies and governments.

First, he was of the view that the production restrictions inherent in the prorationing scheme implemented by the Energy Resources Conservation Board of Alberta created an environment in which the industry could elevate crude oil prices. Second, he observed that the National Oil Policy, which limited competition west of the Ottawa Valley from imported crude oil sources during the period 1961 to 1973, helped insulate that part of the country from offshore competition at a time when international prices were sagging. Third, he believed that domestic crude oil producers took advantage of this reduced competition to keep domestic crude oil prices higher than they would otherwise have been. Finally the Director asserted in his Green Book that integrated oil companies, which dominated the ownership and the operation of the major pipelines, exercised that power in a manner that suppressed price competition among domestic producers of crude oil, and that also distorted competition among the refiners to whom the crude oil was transported.

The Green Book was not entirely clear as to whether the Director's general factual assessments outlined above were limited to the pre-1973 period or were meant to apply through to 1981. International supply conditions changed dramatically in the 1970s, notably as of 1973, leading to the discontinuance of the NOP and to the establishment of import compensation. In any event, it became clear during the Commission's hearings that insofar as the upstream sectors of the industry were concerned, and unless expressly stated otherwise, the Director only regarded his Green Book as speaking to the period up to 1973. At the conclusion of the Commission's hearings, the Director abandoned the remedial proposals relating to the domestic production and pipeline sectors which he had made in his Green Book. As for the prices paid for imported crude oil after 1973, he concluded, based on the evidence tendered during the Commission's hearings, that the prices had been "higher than necessary", due in part to the design and operation of the federal government's import compensation scheme, and in part to the failure of Canadian refiners to take advantage of the availability of foreign crude oils at prices lower than those established under their supply contracts with their international affiliates. The Director proposed remedies in his final argument with a view to changing the design of aspects of the import compensation program and to providing firmer guidelines for the determination of "fair market value" under the Income Tax Act as it applies to crude oil imports.

Because of the Government's decision in 1985 to allow Canadian crude oil prices to be set by market forces, the import compensation program has been discontinued and, therefore, this part of the Director's remedial proposals is no longer applicable.

The proposal regarding the tax guidelines falls within the realm of income tax enforcement, an area in which the Commission has no expertise and which is well outside its mandate. Although the Commission does not intend to make any comment on the proposal, it has been available to the Department of National Revenue for whatever assistance it may be to its officials. Moreover, the Commission does address the importance of strong tax enforcement in its conclusions.

(b) Refining Sector

The Director's position throughout has been that the Canadian refiners, each of whom unavoidably possesses a degree of market power as a result of the small Canadian market and the need for economies of scale in refining, coordinated their market power through and in conjunction with a comprehensive network of interdependent product supply agreements among themselves in order to restrain price competition in the marketing sector. More particularly, in his view, the purposes and effects of these product supply agreements have included the restriction of competition among refiners, restrictions on the supply of refined product to unintegrated resellers, and general coordination of capacity reductions and expansion in order to ensure that supply does not significantly exceed demand.

Although, in the final analysis, distortions of or restraints upon competition may manifest themselves primarily in performance deficiencies at the retail level, the Director was of the view that anticompetitive coordination at the refining level was central to the transmission of competitive deficiencies between sectors in the industry by virtue of the refining sector being the central link in the vertical integration chain. In the Director's words:

> Upstream, in production, the structure of the refining sector contributed to the concentration of crude control in the hands of a small number of companies. Downstream, in marketing, the interdependence that developed between firms at the refinery level enhanced the tendency of these same firms to adopt mutually reinforcing disciplinary policies that restricted competition.

In his Green Book the Director had proposed that refinery supply agreements be subject to approval of the National Energy Board, which would be required to consult with the Minister of Consumer and Corporate Affairs. In his final argument the Director urged instead that reciprocal or interdependent product supply agreements between refiners be essentially prohibited and that all other product supply arrangements be severely restricted in duration unless, following review by the Restrictive Trade Practices Commission, the agreement was found to have a beneficial effect upon competition.

(c) Marketing Sector

The Director's concerns regarding the marketing sector focused almost exclusively on the marketing of motor fuels, notably gasoline. Although he addressed heating oil peripherally, and some of his remedial recommendations in the Green Book related to heating oil as well as to gasoline, the Director's recommendations at the end of the Commission's hearings were directed solely to the marketing of motor fuels.

The overall allegation in the Green Book was that not only did the majors avoid significant price competition among themselves, but that since the 1950s, acting as a coordinated unit, they had engaged with considerable success in exclusionary conduct to delay, inhibit or prevent price competition and organizational change in the marketing of gasoline.

According to the Green Book, the "regional majors" at the time (Irving Oil, Petrofina, Supertest, British Petroleum, Sunoco and Standard Oil of British Columbia) followed and reinforced the practices of Imperial Oil, Gulf, Shell and Texaco (the national majors) by not competing in price among themselves. The Director attributed this in large part to a "mutual forbearance" among these companies that resulted in part from "linkages" at the production and refinery levels. Instead, in the Director's view, the integrated petroleum companies competed for volume by means of location and number of outlets, quality and extent of service, brand advertising, credit card facilities and promotions. In the Director's view this was very expensive competition, resulting in many low volume and high unit cost outlets, and led to high wholesale and retail margins.

These high margins in turn attracted no-frill, low price, unintegrated retailers including mass merchandisers, automotive supply companies and "unbranded discounters" to the potentially high volume urban markets. The Director's analysis of the facts available to him led him to conclude that rather than seeking to compete with the independents on the basis of performance, in terms of offering lower prices instead of the frills, the majors responded with exclusionary tactics with the purpose and effect of inhibiting entry and expansion of the independents, and of eliminating some of the lower priced competitors. The Director concluded that the majors sought to and did raise the entry barriers, protected their investment in their branded networks, and thereby entrenched and extended "the monopolistic position that they owed to their control upstream in refining and at the crude acquisition stage", by seeking to prevent or lessen competition on the basis of price at the retail level.

The Director's view as expressed in the Green Book was that the exclusionary or disciplinary tactics adopted by the majors varied within the time frame covered by this Inquiry. In the initial period of significant independent activity, 1959 to 1964, the majors were able to implement low prices at their own outlets by putting their dealers on consignment or by granting special allowances to dealers who set low pump prices. In the next period of significant independent activity, 1969 to 1973, the majors continued to use the first two tactics but also adopted second or "fighting" brands for stations owned and operated by themselves, by means of which they would target the independents with low prices.

The Director asserted that as international supply conditions changed in the late 1960s and the 1970s, and control by the multinational oil companies over international crude oil supply began to diminish, the interests of the national majors became directed to a greater degree than in the past at the elimination of the independents. In part, in his view, this was accomplished by buying out and merging with certain independents, limiting gasoline supplies to independents, and by squeezing the margins of independents by either increasing the wholesale price to them or by lowering prices at their own retail outlets so as to reduce the prevailing retail price.

The Director's assessment of the current problems in the retail sector of the market, and of the required remedies, changed during the Commission's hearings. His changed view is reflected in the following statement from his final argument. After referring to the types of practices alluded to in the Green Book, as described above, he stated:

> In the Director's submission, these practices all served to restrain the independent marketer. It should be added that many of these practices continue today.
>
> The competitive issues today, however, are different from those prior to 1973. The integrated companies are no longer attempting to control the reseller, that day has past. The present concern is that the integrated companies have embarked upon an ambitious program to control the price at which gasoline is sold throughout the economy.

The Director's principal concern in this regard related to evidence that over the last few years the integrated companies have acquired pump pricing control over a larger and larger proportion of total retail motor fuels sales by means of company owned and operated service stations (largely self-serve), the sale of gasoline in some cases on an agency basis through outlets owned by others, and by means of extensive temporary allowances and dealer support programs which, in the Director's view, have a price supporting effect.

The remedies proposed by the Director in his final argument pertaining to the marketing sector are examined in detail in this report. His principal recommendations were that no retailer be tied exclusively to any one supply source in its purchase of motor fuels, that suppliers of motors fuels be prohibited from obtaining direct or indirect control over pump prices at any marketing outlets other than those owned and operated directly by the supplier, and that any acquisitions by refiners of retail motor fuel outlets be subject to prior approval by a government agency.

4. Independents

The term "independent" is ambiguous but tends to be used in this industry to refer to a marketer of gasoline or heating oil who retails under his own brand but who does not own a refinery. The term is used in that sense in this Report, although the Commission recognizes that other marketers also enjoy varying degrees of independence from their suppliers.

As so defined the group includes large retailers such as Canadian Tire and Mohawk Oil, and retail chains that sell gasoline as agents for refiners. The group also consists in important part, of a number of smaller businesses that operate one or only a few gasoline outlets. These smaller businesses tend to be financially more precarious than the others and have a unique set of concerns regarding the functioning of the market.

Although some independents occasionally have crude oil processed for them under contract with a refiner, and import products and operate storage terminals and transportation facilities, in essence their business consists of purchasing supplies from one or more refiners for resale under their own brands. Independents in gasoline retailing, many of whom also sell diesel fuel, home heating oil and industrial fuel oil at wholesale and retail, are sometimes referred to as "unbranded" or "private brand" which, although perhaps confusing to someone outside the industry, means only that they do not conduct business under a "major brand" as a "branded" dealer.

The Commission heard testimony from several members of this group from virtually every province. In addition, the interests of many independents were represented during most of the Commission's hearings by a representative of the Canadian Federation of Independent Petroleum Marketers[1] (the "Federation").

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[1] Despite repeated requests and undertakings to do so, the Federation did not advise the Commission of its list of members. It is known, however, that the Federation did not represent or speak for the larger chains of unintegrated resellers such as Canadian Tire and Mohawk.

The largest independents such as Mohawk Oil and Canadian Tire did not express concerns about the operation of the market.

The only domestic supply options for almost all independents are, directly or indirectly, their integrated competitors, and their main concern has to do with the terms upon which they obtain supply. To a lesser extent, they are concerned about access to product, including equitable access in times of overall shortage. They also complained that aspects of certain government programs, notably the import compensation regulations, the Domestic Transfer Compensation Program, federal sales tax and Ontario's fuel oil coloration requirements, prejudiced many independents. After examining the latter three complaints in some detail, the Commission concluded that they did not raise general competition policy issues.

As to the main concern regarding terms of supply from Canadian refiners, most of the representations related to the power of the majors to shrink the operating margins of the independents virtually at will, either by competing in a way that drives the prevailing pump price down or by raising the wholesale price. Smaller independents prefer to preserve their short-term flexibility to seek out the lowest cost supply options and often do not have supply contracts. Even when they do, their short-term (typically one year) contracts with specified minimum and maximum quantities, often contain no price guarantees. Independents told the Commission that if an independent does not wish to pay a price increase that is demanded, his only option is to seek another source of supply. Also, when the relationship between wholesale and pump prices is such that most branded dealers are on support, support payments or discounts to the independent are discretionary as to whether they are given, at all and as to their amount, and if they are given, it is frequently after the fact. Many independents claim that overall, the environment is such that they are inhibited from taking price initiatives. At the same time they believe that their costs of operation are lower than those of the major brands due to lower administrative and brand promotion overheads and to typically lower cost stations. They are of the view that they should be able to reflect these lower costs in relatively lower pump prices. A lower pump price is virtually the only basis available to them for attracting gasoline customers, and they feel unable to establish what they feel is an acceptable major brand/independent pump price differential in the market.

Some independents also complained that the majors' prices to commercial/industrial customers were such as to virtually exclude independents from that segment of the market.

As to how these concerns might be alleviated, the Federation urged a strengthened competition law. In particular, it strongly recommended amendments to the Combines Investigation Act such as those contained in recent Government proposals. The Federation also strongly recommended a greater informal quasi-regulatory role for the Director, which it termed one of "moral suasion" or "mediation". This latter related to the concern of the independents that there be quick and effective remedies for misuses of market power which could most satisfactorily be achieved under informal, non-adversarial arrangements.

The Federation submitted that there should be no other form of government intervention in the petroleum products market place, although it did recommend that further private sector "Canadianization" of the downstream segment be encouraged. As for the continued role of Petro-Canada, the Federation submitted that "Petro-Canada should . . . behave within the industry under the same terms and conditions of the marketplace as comparable competitors in that it is profit-motivated and that the marketing activities of Petro-Canada should be judged as a separate operation and be reported on a segmented basis. Petro-Canada should set the example and lead other refiners in not treating its own marketing system with any preference relative to how independents are treated who compete in that same market."

The Federation recommended that the Commission reject the Director's proposals that exclusive dealing in motor fuels be prohibited, except where the supplier's price was not "reasonably competitive". It did not consider that it was necessary to require advance government approval of acquisitions of retail motor fuel outlets except under the foreign investment review controls. Further, it considered that implementation of the Director's recommendations that non-petroleum use covenants be prohibited, and that marketers be permitted to identify the manufacturer of the motor fuels they were selling, might well do more harm than good.

5. National Automotive Trades Association

The National Automotive Trades Association of Canada ("NATA") is a federation of eleven provincial associations, the membership of which in turn consists of approximately 6,000 gasoline retailers in addition to a number of new and used car dealers, auto body shops, towing companies, automatic transmission rebuilders and the like.

The typical gasoline retailer represented by NATA is a full service dealer who owns or leases his premises and who, in addition to purchasing gasoline from his franchisor/ supplier for resale under a major's brand, also operates one or more service bays. Many such service station operators testified before the Commission. In addition, NATA made an opening submission at the start of the Commission's hearings and submitted lengthy argument at the conclusion of the hearings.

NATA and the gasoline retailers it represents, have one main complaint about the way gasoline is marketed in Canada: they feel that they are competitively prejudiced by being required to purchase gasoline at the dealer tank wagon price[2], an "artificially high wholesale price" and not "a realistic or true wholesale price". NATA told the Commission that its members compete against self-serve and second brand outlets, which are owned and operated by their suppliers, and against "private brand" independent resellers, none of whom pays the dealer tank wagon price and all of whom, for one reason or another, pay a lower transfer or wholesale price.

The branded dealers also had other complaints relating to what in their view, was excessive market control by the vertically integrated oil companies over the retail sector, and in particular, over retail pricing. NATA is of the view that downstream vertical integration developed largely as a result of attempts by the majors to "stabilize" the industry in the face of problems that occurred from time to time, and that it "necessarily had anti-competitive results". As expressed in NATA's final argument:

> The situation today is that there is no meaningful wholesale price and no meaningful independent business status for either branded dealers, lessee dealers or independent resellers. The independent resellers face the same control mechanisms as do the branded dealers; contracts are arbitrarily terminated, price support is given at whim. Virtually, only the larger independent resellers with numerous outlets remain viable. The exception to this statement proves the rule — they are the outlets with guaranteed margins whose proprietors' only role is to glean benefit from ownership of the real estate, with no involvement in the marketing of the gasoline.

NATA made several recommendations to the Commission to deal with the problems as it perceived them and to help achieve "pricing fairness and stability at the retail level". First, it recommended that "functional divorcement" be imposed upon the industry whereby a refiner, although it would be permitted to own retail gasoline outlets, would be prohibited from operating or controlling any outlet to which it supplied product, either directly or indirectly or pursuant to an agency or management contract. In conjunction with proposing functional divorcement NATA further proposed that a branded dealer have a right of first refusal to purchase "his" service station property should it be offered for sale by his supplier.

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[2] The dealer tankwagon price (DTW) is the delivered wholesale price to major brand dealers.

Second, NATA proposed that "refinery gate pricing" be imposed upon refiners. It would require each refiner to charge the same posted price to all customers on the same day for each product and service, regardless of volume or class of trade. No other wholesale, tank wagon or transfer prices would exist. The "refinery gate prices" would apply to customer pickup at the supplier's refinery or bulk terminal facility. Additional products or services, including promotions and delivery costs, would be priced and paid for separately.

As a possible alternative to uniform refinery gate pricing NATA had urged in its opening submission to the Commission that the prohibition of price discrimination as contained in section 34(1)(a) of the Combines Investigation Act be strengthened to make clear that the wholesale supply of "branded" and "unbranded" gasoline would be treated as being the supply of products of "like quality" within the meaning of section 34(1)(a), thereby requiring that the same price be charged to competing retailers where the volumes purchased were the same. Consignment sales would also be prohibited.

NATA further proposed the enactment of a "Dealer Bill of Rights" which, unlike the voluntary service station lease guidelines that currently exist in Alberta, B.C. and Ontario, would provide legally enforceable protection against unilateral lease termination, non-renewal, site conversion and rent increases. The issues raised in this proposal lie, in the Commission's view, outside the scope of its mandate.

6. The Association des Distributeurs d'Essence du Québec

The Association des Distributeurs d'Essence du Québec (ADEQ), an association of some Quebec gasoline lessee-retailers, made a general submission to the Commission. ADEQ is of the view that the profits of its members are unfairly prejudiced by the direct operation of self-serves by refiners; by their members having to pay for gasoline at the time that it is delivered to them instead of when they resell it, with the result that they must finance the gasoline in the in-ground, storage tanks and must pay for gasoline that evaporates prior to the time of retail sale; by the insecurity of tenure when stations are leased from petroleum companies; by their members having to pay for equipment maintenance; by their members having to pay credit card charges; by having different prices and business hours imposed upon different stations by petroleum company lessors; and by their members paying rents that are too high, particularly for low volume stations. Further, ADEQ is of the view that its members should be empowered to negotiate assured retail margins with their suppliers and to limit the entry of new gasoline retailers into their markets.

ADEQ proposed a series of remedies tnat in its view would meet the concerns of its members. It recommended to the Commission that refiners be prevented from selling at the retail level; that service station owners be required to pay for the gasoline supplied to them only as and when it is resold by them; that credit charges be prohibited; that service station equipment maintenance be paid for by petroleum company lessors; that lessees selling less than 300,000 gallons per year not be required to pay rent and that above that volume level, rent be limited by a formula related to profits; that greater assurances against lease cancellation and nonrenewal be provided; that uniform prices be charged by refiners to all retailers; that retailers be permitted to determine their own business hours; and that retailers be given control over the licensing of additional retailers in their markets.

The proposals relating to business terms between lessors and lessees deal with similar subject matter as NATA's proposed "Dealer Bill of Rights" and similarly lie outside the scope of the Commission's mandate. Here as elsewhere it should be clear that the fact that a matter is outside the Commission's terms of reference in no way reflects a Commission view of the merits of complaints or proposals.

Some of the other proposals in ADEQ's submission could have general competitive effects and are subsequently addressed.

7. Views of Governments

Although the Commission specifically invited submissions from all provincial governments and from such federal government agencies believed to have a special interest, only the then Government of Saskatchewan, as a government, made a submission. The submission was made orally and in writing by Saskatchewan's Minister of Consumer and Commercial Affairs in early 1982.

Although the Government of Saskatchewan questioned the current relevance of the Director's concerns regarding crude oil pricing in the period 1958-1973, it was generally supportive of the remedial recommendations made by the Director in his Green Book provided that the Commission found, after hearing all the evidence, that the Director's factual conclusions and analyses were warranted. The Government of Saskatchewan expressed no view as to whether or not those conclusions or analyses were warranted.

The Government of Saskatchewan invited the Commission to examine two general subjects about which the Government had some concern. First, it was concerned about the effects of unequal bargaining power between the refiners and the gasoline retailers they supplied, and in particular expressed the view that there should be no discrimination as among retail outlets operated by the refiner, those operated by lessees and those operated by independent or other resellers. The second general concern related to cost and price differences in gasoline as among different communities.

The Government of Saskatchewan also expressed support for the general strengthening of Canada's competition laws and, in particular, for proposals to decriminalize the competition laws so that remedial action could be taken without having to meet the exacting standard of proof required under criminal law.

8. Responses of the Integrated Oil Companies

The integrated oil companies responded primarily to the allegations, arguments and recommendations that were made by the Director, although they also responded to certain recommendations made by others.

The initial response by the major integrated oil companies to the Green Book was made in their opening statements at the commencement of the Commission's hearings. Each of them flatly denied both the historical and current validity of the Director's criticisms. They criticized the quality of his analysis and expressed outrage at the accusatory tone of the Green Book and the manner in which the Green Book had been released and publicized.

Each of the major integrated oil companies presented comprehensive evidence in each phase of the hearings through written submissions and panels of witnesses consisting of experienced officers. Each company's evidence, which was presented after that of the Director in each phase, outlined the history and nature of the company's involvement in the relevant sector and addressed the Director's assertions as they understood them to be at the time of giving evidence.

At the conclusion of the hearings, and after having reviewed the Director's lengthy concluding argument and recommendations, each of the integrated oil companies presented lengthy written argument. The Director had an opportunity to reply and did so.

In general, the oil companies claimed that the Director's analysis was superficial and was virtually totally lacking in objectivity. They criticized many of the Director's submissions as being based on a fundamental misunderstanding of the evidence, sometimes on a deliberate misuse of the evidence, and sometimes as having no basis at all. Each of them emphatically denied being party to any concerted conduct in any sector of the industry at any time.

With respect to the international sector, the majors submitted that such reliable evidence as existed showed that they paid "fair market value", or no higher than a reasonable range of third-party prices, for their crude oil, and that in particular there was no evidence of an overcharge because there was no evidence of their having paid prices that were generally higher than third-party prices in comparable transactions. They submitted that the Director's assertion that they had paid artificially high prices to their affiliates for crude oil, resulted from speculative and theoretical calculations based upon faulty assumptions and unjustified inferences from the evidence. Further, they claimed that they obtained a degree of security of supply and flexibility through their long term contracts with their affiliates that they could not have achieved by relying predominantly upon spot market purchases.

Ultramar Canada Inc. submitted that the Director's concerns about international transfer prices were no longer relevant because "world markets are no longer dominated by a few international majors with common interests".

As for the Director's views regarding product supply arrangements between refiners, the oil companies submitted that longer term arrangements reflected the size of their marketing operations and the large scale of refinery investment. In their view the Director did not appreciate either the nature of the need for security of supply to a large marketing organization or the fact that the arrangements facilitate efficient utilization of refining capacity and thereby reduce costs. They submitted that reciprocal or interdependent product supply arrangements provide additional security of ongoing supply and thereby also facilitate the efficient utilization of refining capacity. Further, they denied that reciprocal or other supply agreements between refiners interfere or have interfered in any way with making product available to unintegrated resellers, and that in fact such agreements enhance competition by enlarging the competing supply options available to such resellers in the regions where the exchange occurs. As for the Director's allegation that unnecessary and anticompetitive exchanges of information occur or have occurred between refiners in conjunction with the negotiation or administration of product supply agreements, the submission of the refiners, in the words of Imperial Oil, was that "it is almost inconceivable, and there is certainly no evidence to suggest, that any company would divulge to a competitor the substance, let alone the detail, of its policies and future plans".

With respect to marketing, the majors submitted that the Director's analysis was simplistic by purporting to measure "efficiency" or optimum performance by volume of sales per station, without reference to the complexity and continually changing characteristics of demand. They submitted that partly as a result of this, but for other reasons as well, the Director confused vigorous competition with abuse of market power and misunderstood the purpose of second brands, which they said were and are intended to cater to "the more price conscious segment of the market". They also submitted that the Director's analysis of price wars and price restorations was unrealistic and that in particular he misunderstood the purpose and effect of dealer support programs, which they said were to assist dealers to survive, at the expense of the refiners, during periods of intense retail price competition. Further, in the view of the majors an analysis of the realization data and other evidence refutes assertions of price discrimination.

Overall, the major integrated oil companies submitted that market shares or concentration were not reliable indicators of market power in gasoline retailing, that significant change had occurred and continues to occur in the industry, that vigorous new competitors enter the industry on a regular basis, and that the unintegrated reseller segment continues to thrive. They submitted that Canada has been and continues to be well served by its petroleum industry and that no changes are required to improve the way the various markets are operating.

The submissions made by the regional major, Ultramar Canada Inc., differed from those of the other integrated oil companies in one important respect relating to the fact that, in its words, "Ultramar shares some of the Director's concerns about the state of competition in the downstream sector of the oil industry". Ultramar was of the view, however, that the Director's remedial proposals relating to the downstream sector would do nothing more than reinforce the status quo. In particular, in Ultramar's view the Director's proposals regarding exchange agreements would prejudice regional refiners more than it would prejudice companies operating refineries in more than one region of Canada, and would further entrench the positions of the national integrated majors. In Ultramar's view "the single most important anti-competitive marketing practice today is concealed marketing by majors through controlled "independents" which involved a "strategy of selling below cost". In Ultramar's view this anti-competitive practice was facilitated by cross-subsidization of downstream losses by upstream profits, and that "the most effective method of dealing with the Director's key concerns would be complete divorcement of marketing and refining from upstream operations". Ultramar recommended this solution.

9. Recent Developments

Following the conclusion of the Commission's main hearings and the submission of comprehensive written argument by all interested persons, certain events transpired that led to further hearings and to the reception of further evidence and argument in 1985 and early 1986. One was the adoption or imminent adoption by some refiners of what appeared to be a fundamentally new type of wholesale pricing practice (referred to as "rack pricing") that would affect some of the more contentious issues in the marketing sector. A second, was Petro-Canada's purchase of Gulf's refining and marketing assets west of Quebec. Third, Ultramar's purchase of Gulf's assets east of Ontario that, together with an aspect of Petro-Canada's earlier purchase, appeared to ensure closure of Gulf's Montreal refinery, raised certain questions regarding the balance of supply and demand for petroleum products in Quebec that the Minister of Consumer and Corporate Affairs asked the Commission to consider in its Report. The Commission has received evidence and argument on each of these three important subjects and addresses them in this Report.

10. A Word About What Follows

Part B of this Report addresses the allegations made by the Director to the effect that Canadians were "overcharged" by Canada's major petroleum companies during the period 1958-1973. Part C addresses more recent developments in the petroleum industry and current competition issues. Part D contains the Conclusions and Recommendations of Commission Members.

Some of the kinds of issues examined in this Report are also addressed in certain respects by Bill C-91, introduced into Parliament in December 1985 to amend the Combines Investigation Act. Where appropriate, the Commission has sought to relate its conclusions and recommendations to the legislative proposals contained in Bill C-91.

IV

Conclusions and Recommendations

1. Introduction

Some of the Commission's conclusions set out below arise from the analysis in specific chapters, and in other cases they relate to matters addressed in several chapters. The Conclusions and Recommendations emerge as the bottom line as the Commission saw it at the end of the day in April 1986 when the Report was completed.

A number of allegations and criticisms in the Green Book, largely historical, are addressed first. This is followed by conclusions relating to current issues, and then by the Commission's recommendations.

The analytical support for the conclusions is to be found in the chapter or chapters dealing with the relevant subject matter. The essence of the rationale for the recommendations is repeated here.

The Commission considers that several conclusions warrant as much review by governments, legislators and the public as the recommendations because actions by one or all of these groups may be required to bring about the better functioning of markets in the situations described.

2. Conclusions Regarding Historical Allegations and Issues

The Commissioners have written separate opinions about the allegations made in the Green Book regarding the so-called overcharge of Canadian consumers by the major oil companies in the 1958-1973 period, although in some cases the variance in their assessments is slight and interpretational. While the two Commissioners are agreed on all other conclusions and recommendations in the Report, their individual appraisals of the historical allegations of overcharge set out in the Green Book differed in some degree and their separate assessments follow.

(a) The "Overcharge" Allegation

(i) Views of the Chairman

The allegations in the Green Book relating to a deliberate overcharge of Canadian consumers by the major oil companies, referred to perhaps irresponsibly by the media at the time as a "rip off", needs to be examined from two perspectives — neither of which will come as a surprise to participants in the proceedings. First, did the Director prove these allegations to the Commission's satisfaction? Second, does the evidence regarding these historical practices have any relevance to the marketplace and the public interest today?

As to the first issue, my judgement is that the Director failed to establish the Green Book allegations. Apart from questions of "excess cost", there was no proof or indeed evidence introduced during the hearings by the Director to substantiate the claim of a pass-on to consumers of so-called excess costs. As to whether or not there were excess costs, we had to look at each area where the Director alleged such "excess costs" were present.

The first of these is that Canadian subsidiaries of major oil companies paid excessively high prices for crude oil imports. This is in part a tax question, and one with which National Revenue sought to deal with varying results. Efforts to maximize profits to the U.S. parent were legitimate corporate responses unless Canadian tax or other laws were broken. National Revenue sought to monitor so-called "transfer pricing" to protect Canadian tax interests and still pursues these objectives. Limitations of staff and expertise at National Revenue may have worked in the majors' favor. This, while not explicitly a competition issue, is addressed later in this chapter in terms of its current relevance.

The other side of the public interest might be analyzed by determining whether there was crude oil available in the world market at lower prices than the prices of crude oil that moved through major affiliated channels. The analysis in Chapter VII suggests that cheaper crude oil may have been available in limited quantities. However, in my judgement, this was meaningless since Canadian subsidiaries in this industry had neither the resources nor the liberty from their parents to exploit such opportunities. Their corporate creed was tradeoffs that worked in favor of buying crude oil from and using transportation facilities of their parents.

This is not to suggest that Canadian chief executives or perhaps the boards of directors of Canadian companies did not make efforts on behalf of their own operations or minority shareholders. As indicated in the previous paragraph, there was also testimony to the effect that matters like security of supply and the use of affiliated transportation systems were more attractive than attempting to shop for cheaper crude oil. In the last analysis however, and despite occasional efforts to shop, they did not appear to have the necessary room to manoeuvre towards this objective, or a clear set of workable alternatives open to them.

Apart from the efforts of National Revenue and a rather superficial survey undertaken by the National Energy Board in 1972, the Canadian Government made no apparent effort to change these practices. This may have reflected the fact that relatively little pressure was exerted by consumers during the 1958-1973 period because of the relatively low price of gasoline and heating oil. Whatever the reason, it is incorrect to allege that the majors were "guilty" of overcharging consumers as a result of their crude oil pricing policies. However, as indicated in the previous paragraph, it is also clear that Canadian subsidiaries were subject to a high degree of control by their parent companies that left them committed to a pattern of supply through affiliated channels. It is useful to think of what lessons this has for the situation today with deregulation in Canada and, at least temporarily, a world glut of crude oil. It is clear that benefits of trade liberalization and world pricing can be undermined by parental control of Canadian subsidiaries in the petroleum industry or indeed in any other Canadian industry exposed to the forces of trade liberalization with the United States, as is now being widely discussed. Certainly for the Canadian petroleum industry and Canadian markets, it is essential that no barriers to free movement of crude oil or product or the prices at which these commodities move, be created by decisions taken by the parent.

A second element of the Director's overcharge allegations relates to a possible manipulation by the majors of the National Oil Policy (NOP) in the 1960s and early 1970s with consequential higher costs to consumers in some areas of the country. In my judgement, the views expressed in the Green Book reflect theoretical economic conclusions reached in isolation from broader policy objectives. The policy openly involved higher crude oil prices for those areas of Canada that had to substitute Canadian for foreign crude oil. I broadly support the analysis of the NOP in Chapter VI and consider that the Director was totally unjustified in attempting to attribute to the major oil companies the higher costs and prices that may have been brought about in Ontario west of the NOP line. Moreover, there is no relevance in any of the Director's case regarding the NOP, faulty as it is in my view, that has any bearing on today's situation. Unlike the National Energy Program of the 1980s, there was support for the National Oil Policy by successive governments from both parties in the 1960s and early 1970s — and like any national policy, its benefits and costs varied in different regions of Canada.

The final element of the so-called overcharge relates to excess costs related to gasoline distribution. For reasons explained in Chapter V, its inclusion in the overcharge allegations is also unwarranted.

The most important contribution the Commission can make is in its *appraisal and recommendations regarding competition in the Canadian marketplace today*. This has been done and our agreed conclusions and recommendations are set out accordingly. Nevertheless, given the seriousness of the Green Book's allegations regarding the so-called overcharge and the media's reaction at the time, I consider it very important to set the record straight based on my assessment of evidence and argument received by the Commission in the lengthy part of the hearings devoted to this issue because of the Director's allegations in the Green Book.

The Director's case that Canadian consumers were overcharged between 1958 and 1973 as a result of actions of the major petroleum companies was misconceived. There was no proof placed before the Commission that Canadian petroleum companies overcharged consumers by 12 billion dollars or that, indeed, any measurable excess costs were passed on in any significant degree between 1958 and 1973. Efforts by the Director devoted to that bit of history could have been much more productive in examining current practices in the industry and would have shortened the inquiry.

(ii) Views of Dr. Roseman

For reasons set out in Chapters IV to VII, I have concluded as follows with respect to the Green Book's allegations that excess costs were incurred and that they were passed on to consumers:

(aa) Regarding the importation of crude oil:

- There was an excess cost.
- There is no way of responsibly calculating the excess although the Green Book overstated it.
- There is virtually no direct evidence of a pass-on. To the extent that there may have been a pass-on it would have presumably taken the form of higher gasoline prices caused by deficiencies in the operation of Canadian markets.

(bb) Regarding the NOP:

- There was no excess cost attributable to actions of the oil companies. Any higher costs resulted directly and predictably from Government policy.

- In any event the Green Book calculation of the higher costs was substantially overstated.
- Most of the higher costs resulting from government restrictions imposed by the NOP were passed on to consumers in Ontario west of the NOP line.

(cc) Regarding alleged inefficiencies in marketing:

- The conceptual difficulties of attempting to identify, let alone calculate, any excess cost or pass-on in this regard are so severe that the "overcharge" framework of analysis is not helpful or illuminating. It is an extremely narrow and static framework in any event, and it is particularly so when the essential question has to do with the speed and nature of industry adjustment in differing markets and over a lengthy period of time. The underlying issues require a more complex and judgemental analysis.

(dd) Regarding imported products:

- There was an excess cost to the extent that products were imported as a result of unnecessarily high costs of imported crude oil. Some imports probably occurred for these reasons but the proportion is unknown.
- Therefore, the extent of the excess costs cannot be responsibly calculated although the Green Book undoubtedly overstated them.
- Whatever excess costs existed were passed on, primarily to consumers east of the NOP line.

(b) The "Harmonization" Allegation

The Commission found no evidence of collusion in any sector of the industry. While the Director's case technically did not include a direct allegation of collusion, there are a number of statements in the Green Book which clearly point in that direction, and in the interests of fairness the Commission wishes to make its view of the matter clear.

3. Conclusions Relating to the Post-1973 Period

(a) Domestic Crude Oil Production and Pipelines

The Commission does not see a need for additional public policy action with regard to domestic crude oil production or pipelines.

In his Green Book remedial proposals the Director had called for greater regulation of pipelines and for modification of the policies of the Alberta Petroleum Marketing Commission (APMC). Both are part of the reality of 1986. All aspects of pipeline operation, including tariffs, are regulated today. The APMC sells less than a third of the total light oil production in Alberta and must respond to market conditions like any other seller. Buyers have many sources of supply. Today, following deregulation, domestic crude oil prices are largely determined by competitive forces in the Chicago and Montreal markets where Canadian crude oils compete with foreign oil prices.

The Director did not maintain his Green Book recommendations regarding domestic crude oil production, and the Commission notes further that the deregulation of domestic crude oil pricing in 1985 has, if anything, made access to domestic crude oil by potential users even more open than it was previously.

Nor did the Director maintain his Green Book recommendations relating to divestiture of pipelines or aspects of their regulation.

The current regulatory structure is adequate, in the Commission's view, to deal with potential problems of excess profits and access to and the use of pipelines that could arise as a result of the unavoidably high concentration in this sector.

(b) Imported Crude Oil After 1973

There is no evidence that companies paid higher than third-party prices for crude oil imported into Canada after 1973 except for certain transactions described in Chapter IX.

From 1973 to 1980 most crude oil was traded internationally, and imported into Canada, at the Official Government Selling Prices (OGSP) of the producing countries. These prices were equal to or lower than those paid, on average, in third-party transactions. There then followed a period of a year or so when, after allowing for various non-price concessions, term prices exceeded OGSP price levels.

The softening of crude oil prices since 1981, their sharp drop over the last few months and the recent deregulation of crude oil prices in Canada have created a situation that, as in the 1960s, requires firms to shop diligently in order to minimize their crude oil costs. It is not an easy task, however, given the volatility of prices. It is, of course, even more difficult for government agencies, as outside parties, to evaluate the purchasing performance of firms, and transfer prices of imported crude oil become a matter for concern given the importance of the "import option" for both crude oil and product. Nevertheless, the enormous growth in the third-party market and in the volume of spot transactions eases the task of the authorities (and of the firms themselves). The development by National Revenue of carefully monitored records on the prices of different types of third-party transactions, and of their relative importance, should provide the tax authorities, given adequate resources, with an effective means of establishing fair market value standards for the various types of crude oil imported into Canada.

(c) The Refining Sector

The nature and extent of inter-refiner supply agreements, including the extensive degree of reciprocity and the long-term nature of some of the agreements, do not give rise to competition problems that require general prohibitions or advance approvals.

Inter-refiner supply agreements, even when they involve reciprocity and are long-term, usually facilitate the process of structural adjustment in the refining sector in order that it may respond to new pressures and take advantage of new opportunities. They can reduce the risk and cost of both adding to and reducing production capacity or, in other words, they can facilitate both entry and exit.

Nevertheless, the magnitude and risk of refinery investment is increasing, and with it comes a greater tendency towards a "joint venture" approach to certain refinery investment. The Commission is concerned that there is not adequate provision in Bill C-91 to ensure the opportunity for the Competition Tribunal to review long-term arrangements between refiners involving large volumes, that could reduce supply or the number of suppliers to the point where on balance the arrangement lessened competition to a degree that was contrary to the public interest. Such a provision is recommended below.

To this end, the Director should be notified of inter-refiner product supply agreements longer than five years in duration, including such agreements currently in force with longer than five years left to run.

Although a preference for reciprocal deals may on occasion add to the cost of entry by regional refiners, and may make vertical integration more pervasive, the historical record of entry suggests that these barriers were not of a sufficient magnitude to justify remedies curtailing the agreements. Part of the added cost of entry is offset by improved efficiencies for the other parties to such agreements. These conclusions, however, are considerably less certain in an environment of little or no growth.

The detailed evidence on particular inter-refiner supply agreements clearly indicates that typically each refiner enters into such arrangements solely with a view to preserving and improving its own individual competitive position as against the rest of the industry, even though this also presumably involves an improvement of the competitive position of the other party to the agreement. It might also, however, produce benefits to firms who are not party to the particular agreement by facilitating a reduction of capacity such as might occur with a merger.

It is not a characteristic or effect of such agreements to stabilize market shares or to deprive unintegrated marketers of supply. It is, however, important to distinguish between essential aspects of the agreements and collateral conditions that might exist in specific agreements. Should any agreement, whether involving refiners or anyone else, restrict in any way the distribution of the product being supplied, or amount to market sharing, or limit in any way the supply or terms of supply to others, or involve a commitment to limit supply or involve any other type of exclusionary commitment, then the rules and procedures under the Combines Investigation Act that apply equally to all industries should provide sufficient remedy. The Commission does however make a recommendation below regarding the scope of a supplier's general duty to supply.

(d) Gas is Gas

The quality of gasoline produced by Canadian refiners is of a uniformly high standard. In fact, refiners themselves frequently sell, under their own brands, gasoline refined by a competing refiner. Similarly, independents receive the same high quality gasoline from Canadian refiners.

As for imported gasoline (and both refiners and independents import to some extent), evidence of sub-standard quality is virtually non-existent.

There was no evidence of quality differences between gasoline as sold to consumers by major-brand outlets and that sold by independent or private brand outlets.

(e) Mergers

A number of mergers in the refining and marketing sectors have increased concentration and removed effective competitors. The merger proposals in Bill C-91 should deal adequately with this subject in the future.

(f) Vertical Integration and Marketing

(i) **The Commission is concerned about the trend over the last decade towards greater centralization in the hands of refiners of the power to set pump prices. Supply arrangements under which refiners obtain partial or complete control over the retail prices of customers with whom they would otherwise compete at the retail level tend to lessen competition.**

In the Commission's view support programs that relate the amount of support to particular retail prices (as is the case with all margin support programs referred to in the evidence), and that are widespread in the industry, are contrary to the public interest. Similarly, the competitive harm becomes significant when extensive arrangements are entered into between refiners and retailers under branded and unbranded agency agreements.

(ii) **A comparison of the available cost information with the margins earned by major-brand gasoline dealers, and by independents in both heating oil and gasoline distribution, does not support allegations or fears that independents have generally been subjected to a predatory margin squeeze in recent years. However, the margins of the smallest independents in gasoline distribution appear to have been severely compressed throughout most of 1979-1983, the period for which information is available.**

(iii) **Regional price differences and swings in prices over time are due largely to variations in competitive conditions caused in part by the number of refineries, the number and types of marketers, the degree of excess refining capacity and the availability of imports. Tax differences and other government interventions also affect prices on a provincial basis.**

(iv) **The Commission finds it difficult to envisage a market restriction in this industry that would not, in its view, be contrary to the public interest.**

For example, processing or otherwise supplying product to persons for export only, on condition that it not be distributed in Canada, seems impossible to justify. Also, unbranded resellers are occasionally prevented by their suppliers, by contract, from reselling in any way other than through their own consumer outlets. On balance, however, in view of the scope of existing legislation and the few current instances of market restriction in evidence, no specific recommendation in this regard is being made.

(v) **All retailers should retain full freedom to offer discounts to customers who pay by cash rather than by credit card.** The Commission considers, however, that the existing price maintenance prohibitions in the Act are sufficient to ensure this freedom, and accordingly recommends no change to the law in this respect.

(vi) **Non-Petroleum Use (NPU) covenants obtained by refiners when they sell former retail gasoline sites have no purpose other than to create an entry barrier into gasoline retailing and, therefore, are not in the public interest.**

While it cannot be concluded that the covenants are always an important barrier to entry, they have no redeeming feature.

(vii) **Recent changes in wholesale pricing practices, referred to as "rack pricing", adversely affect competition insofar as they involve openly stated policies that confidential discounts will not be granted off published prices.**

The effect of public announcements by suppliers in a tight oligopoly to the effect that they will not be granting unpublished discounts off published or widely-known supply prices, can produce an effect very much like that of a horizontal agreement. It communicates past and current actual transaction prices to competitors of the supplier and to competing customers, and where the products are as homogeneous as petroleum products it presents a real risk to the intensity of price competition. Such is the case with the emerging so-called "rack-pricing" policies of Imperial Oil and other refiners. The no-discount aspect of those published policies is not necessary to their legitimate purposes. The expectation of the refiners, and the probability, is that retail motor fuel prices will be stabilized by such a policy and raised above levels that would otherwise exist.

(viii) **The characteristics of the heating oil market with respect to the lack of readily available information on prices and the tendency of consumers to settle on a supplier for at least the duration of a heating season requires consumers to shop actively in order to get best value for their money.**

In some cases this shopping is performed on behalf of consumers who are members of voluntary organizations who negotiate discounts on their behalf. Individual consumers can also be effective in negotiating better prices, for what is a major household expenditure, if they take the trouble to try.

(ix) **A viable independent sector operating efficiently in the retailing of gasoline (and heating oil) contributes to the health of markets in Canada by decentralizing pricing decisions and other strategic competitive initiatives.** The following three conclusions and the related recommendations support this objective.

(x) **The unavoidably high concentration in petroleum refining, together with pervasive vertical integration and dual distribution, makes it very important to take all reasonable steps to maximize the assurance of supply to unintegrated marketers. One avenue is to clarify the scope of the duty of domestic refiners to supply product to others. Secondly, it makes the import option an extremely important competitive factor in areas of the country open to imports.**

These ways of assuring ready access to supplies are more important in Canada than in countries such as the United States which, by virtue of their larger markets, have more refiners, wholesalers and retailers and stronger general competitive pressures.

(xi) **It is important that there be a legal standard of "predation", which is to say a line beyond which conduct by one firm that has harmful effects on another firm's ability to stay in business or to compete, is unjustifiable and against the public interest.**

The Commission considers that the existing law, particularly if supplemented as proposed by Bill C-91, is adequate in this regard. In view of the generality of the existing law, however, the Commission's recommendations set out guidelines for its application to pricing in a dual distribution context.

(g) Government Policies and Programs

There is a need for improved understanding at all levels of government of the effects of government policies on the petroleum industry. There is also a need for improved consultation regarding the purposes and implementation of government policies affecting the industry.

There are so many facets of the "public interest" in this industry, affecting everything from feedstock reserves to retail product markets, and involving the federal, provincial and municipal governments, that some overlap or even conflict of public policies is inevitable. Even within the Federal Government, officials of agencies whose main concern is ensuring overall security of supply, and other officials whose main concern is the healthy functioning of markets (assuming adequate overall supply), do not always appear to agree about priorities where their respective policies interface.

The maintenance of open competition and healthy markets is surely a major dimension of Canadian public policy, and yet it is a truism that frequently as much damage, distortion and cost of a serious and long-term nature is inflicted on the operation of markets, and on the public, by government programs or by their implementation or administration, as by any private sector conduct that contravenes the competition laws.

With respect to the upstream sector, concerns were expressed in the Inquiry about the harm done to markets, perhaps unnecessarily, by aspects of the Oil Import Compensation Program, by prorationing in the Province of Alberta and by aspects of crude oil marketing as carried out in the past by the Alberta Petroleum Marketing Commission.

As to retail marketing, regulatory regimes in Nova Scotia and to a lesser extent in recent years in Prince Edward Island, and also in several municipalities in British Columbia, restrict the establishment of self-serve outlets, full-service gas bars and various forms of cross-merchandising and thereby deprive consumers in those jurisdictions of lower-cost options available to consumers elsewhere in Canada. Such restrictions cripple the ability of the industry to adjust to meet consumer demand, and to charge lower prices made possible by lower cost distribution of gasoline and induced by competitive pressures. The variety of offerings across the country by independent marketers and by integrated firms illustrates the value of allowing each business the freedom to meet consumer needs as it best sees fit in order to strive at all times to maximize its appeal to members of the public by giving them what they want.

In more general terms there was evidence to the effect that rapidly changing government policies, and bureaucratic complexity and discretion, have themselves constituted barriers that were particularly inhibiting to smaller entrepreneurs.

(h) Petro Canada

Government ownership of Petro-Canada affords unique opportunities to correct certain market defects.

The rapid growth of Petro-Canada by acquisition since 1979 has been a mixed blessing in terms of competition in the downstream sector. Although it has increased concentration significantly, it has at the same time consolidated the regional refining and marketing operations of several companies into a potentially stronger competitive force throughout Canada.

Petro-Canada witnesses testified that the company endeavours to comply with the Combines Investigation Act, and if Bill C-91 is enacted it will be required by law as an agent Crown corporation to do so. The fact that it is Government-owned, however, offers a unique opportunity to go further and to use Petro-Canada's potential to promote competition in an industry where the extent of concentration in conjunction with vertical integration continually threatens the vigor of market forces. The small and geographically dispersed nature of the Canadian market, and the magnitude of refinery investment due to economies of scale, in particular, make significant degrees of market power in the Canadian downstream sector unavoidable. Petro-Canada gives the Government the opportunity to reduce the competitive restraints and associated public cost of that market power, not only without having to pass special laws, but also in an ongoing pervasive way that probably could not be achieved by laws.

The Commission does not have in mind the possibility of Government pressures or directives to Petro-Canada with respect to particular aspects of performance, such as reducing pump prices at particular places or times or in particular amounts, because such regulatory-like interventions may do more harm than good. Rather, the Commission has in mind the pursuit of broad market policies, relating for example, to negotiated discounts from listed rack prices, that can limit the oligopolistic similarity or identity of practices that normally would tend to develop and that can have many of the adverse effects of horizontal agreements among competitors. The Government could have this influence by ensuring that possible improvements to the operation of product markets in Canada were given some priority when Petro-Canada's corporate plans and capital budgets were being settled.

(i) Refinery Closures and Supply in Quebec

(i) **The relatively large decline in petroleum product demand in Quebec in the early 1980s made the closure of Montreal refineries that occurred in 1983 a virtual necessity**. Furthermore, the closures themselves produced a secondary effect, namely a further decline in total sales from Quebec refineries to areas inside and outside the province resulting from the fact that the vertically integrated firms who closed their refineries supplied part of their requirements for the Quebec region from their refineries elsewhere. This secondary effect created pressure to close additional refining capacity.

(ii) **The sale and closure of Gulf's Montreal refinery cannot usefully be evaluated on the basis of whether there was "enough" remaining capacity in Quebec, in view of the ready movement of product regionally and internationally**. The principal relevant questions relate to the effects of the closure on competition in Quebec and surrounding areas (principally New Brunswick and Ontario). By reducing surplus capacity the closure no doubt diminished competitive pressures in those areas, but the Government of Canada, by approving Petro-Canada's acquisition of Gulf's Texaco processing contract and subsequently Ultramar's acquisition of Gulf assets, determined that on balance those transactions were in the overall public interest.

4. Recommendations

Recommendation No. 1: To deal with several practices in the petroleum industry and those that may from time to time arise in other industries, a section should be added to Bill C-91 that would allow the Tribunal to issue orders requiring the discontinuance or non-repetition of any conduct that would substantially lessen competition.

Under such a section an order could be issued by the Tribunal whenever it could be established to its satisfaction that the conduct in question has or would substantially lessen competition. The Commission considers that such a provision ought not apply to conduct that was only "likely to" substantially lessen competition, and that it ought only apply to situations where the harm was more certain. At the same time, the proposed provision would not suffer many of the limitations currently contained in section 51 as proposed by Bill C-91.

The proposed section would, for example, permit the following types of conduct or practices in the petroleum industry to be remedied:

(a) large volume, long-lasting exchange agreements where the effect of the agreement was to reduce supply in a market to the point where competition would be lessened substantially; and

(b) support programs or agency or other agreements where the supplier obtains complete or substantial control or influence over a customer/competitor's prices and competition is thereby lessened substantially.

It would be a mistake, in the Commission's view, to enact a new series of provisions limited in scope to the form of each type of arrangement, conduct or circumstance that one could imagine, that could lessen competition substantially (e.g., "exchange agreements", "agency agreements", "support allowances" and so on). Legislative focus on the *form* of a potentially harmful practice rather than on functional *effect* invites firms to introduce new ways of accomplishing the same result that are untouched by the legislation. It also would have the result of proliferating legislation, with the costs of delay and consumption of Parliamentary time as "loopholes" are continually patched to protect the public interest.

Like much of Bill C-91, the section proposed here does not have the degree of specificity or provide the extent of advance certainty or guidance to businessmen that would be required if it were to be criminal law. But then, the great advantage of civil law review is that the public interest can be more effectively protected from conduct or practices that, while in most cases they may promote the public interest or at least not harm it, nevertheless in other circumstances may be found on review to harm the public interest. There is no way of completely dealing with the concern that business disruption and loss may result from a prohibition order, but this problem is common to any competition law. The Director can, of course, be consulted to learn whether he would bring the conduct in question before the Tribunal. Additionally, it may be assumed that the Tribunal would consider all the circumstances when issuing an order and would seek to minimize unnecessary hardship.

Recommendation No. 2: Suppliers who hold high degrees of market power should not be entitled to refuse supply to others except to the extent that they can establish sufficient reason for refusing supply. Market power being a matter of degree, the greater a person's market power is over supply the less should be the need to prove that the refusal injured someone or that it substantially lessened competition, and the more the focus should be on the adequacy of the supplier's reasons for refusing supply.

In deciding whether or not to issue such a supply order the court or tribunal, as appropriate, would no doubt consider all relevant factors, including the number of supply alternatives in the market, the reasonableness with which supply facilities in the market could be duplicated by others, the extent if any to which the supplier and the customer compete, the extent to which the prospective customer is or is likely to be prejudicially affected in his business by an inability to obtain supply from the supplier on usual or reasonable trade terms, and the supplier's reasons for refusing supply on usual or reasonable trade terms.

The Commission considers that in the context of supply by petroleum refiners to independents, for example, the market circumstances are such that unless a refiner could establish sufficient justification for refusing supply on usual or reasonable terms, supply orders would be made.

Recommendation No. 3: Jurisdiction to grant interim orders, particularly with respect to matters affecting supply, should be conferred by legislation.

In making this recommendation the Commission notes with satisfaction that Bill C-91 proposes that a comprehensive power to grant interim orders exist for all matters within the proposed new Part VII jurisdiction of the Competition Tribunal.

Recommendation No. 4: Any person who has been refused supply should be entitled to apply directly to the Competition Tribunal for relief.

The advantages of direct access are that complainants could thereby avoid the delays of having to go through the Director's office when seeking redress of their supply problems, and they could direct the presentation of evidence and argument.

The concern that is sometimes expressed regarding direct public access to the Tribunal is that such access could be used to threaten or harass suppliers. These fears are based largely on experience in the United States with treble damage litigation and have little relevance here. The Tribunal could be relied upon to discourage any possible abuses of its procedures, like any other court.

Recommendation No. 5: The Government should be empowered to exempt particular mergers from review by the proposed Competition Tribunal.

It is possible that two acquisitions considered to have been in the overall public interest by the Government (Petro-Canada's and Ultramar's respective acquisitions of Gulf's downstream assets) would have been brought before the Competition Tribunal had Bill C-91 been law. This means that acquisitions considered to be in the overall public interest by the Government might have been prohibited by a decision-making body applying narrower public interest criteria than those used by the Government. There should be some means of implementing broad public interest criteria with respect to mergers, and only the Government is capable of so doing. A general exemption power would also place domestic mergers on a basis comparable to that of foreign mergers under the Investment Canada Act. Concerns about the independence of the judiciary that could arise if the Cabinet were given power to override a judicial decision would not arise if Cabinet approval or exemption were given before a case was brought before the Tribunal. Although there would be a cost in terms of the loss of a thorough and open assessment of competition policy concerns, it may be assumed that government intervention would only take place when there were other clear and persuasive public interest reasons for an acquisition to go ahead. It would be desirable for the government to articulate publicly its reasons whenever it declared such an exemption, as well as any terms of the exemption.

Recommendation No. 6: Refiners should not impose non-petroleum use covenants on land they sell, and should declare publicly that they will not enforce the covenants they hold on properties they have already sold.

Recommendation No. 7: Further to the conclusion regarding the standard for identifying predation, suppliers and the Director should apply the following guidelines in determining the limits of appropriate pricing in the dual distribution context of the petroleum industry:

1. *Independents should not be required to pay more, at any time, than the lowest retail price charged in the independents' market area by the supplier (i.e., at outlets where the supplier sets the pump price), less reasonable product transportation cost.*

2. *A refiners' net return from retail sales should be no less than the net return on its sales to either branded dealers or independents in any market area.* The calculation of net returns for the purposes of this test would necessarily depend upon the time frame involved and on whether the industry is depressed, static or expanding.

Recommendation No. 8: Refiners who have stated that they will not grant unpublished discounts off published prices should abandon this aspect of their "rack pricing" policies.

Recommendation No. 9: With respect to Petro-Canada:

(a) It would be in the public interest to require the recommendation of the Minister of Consumer and Corporate Affairs, in addition to the ministerial recommendations that are required under existing law, as a precondition for the approval of Petro-Canada's capital budgets, corporate plans and any amendments thereto, and for Government directives to Petro-Canada.

(b) Even though it may not be required by law to do so:

  i) Petro-Canada should not provide to others any assurances that it will not grant confidential discounts off its published prices to resellers or other large volume customers.

  ii) Petro-Canada should abandon its practice of obtaining and enforcing non-petroleum use covenants.

  iii) Petro-Canada should continue to pursue a policy of open and non-discriminatory supply from its refineries to unintegrated marketers to the best of its ability to do so.

(c) Petro-Canada and its employees should be made fully subject to the provisions of the Combines Investigation Act, except to the extent that acts are done pursuant to specific directive or approval of the Governor in Council.

(d) As long as the company is publicly owned, a Committee of Parliament should review the Petro-Canada Act and the purposes and operations of Petro-Canada every five years. Such a review would be facilitated by a special report from Petro-Canada, and by a report from the Minister of Consumer and Corporate Affairs as to Petro-Canada's effect on those aspects of the public interest for which he is responsible.

Recommendation No. 10: With respect to federal, provincial or municipal government interventions into any aspect of the petroleum industry:

(a) The Commission commends to the federal, provincial and municipal governments alike, in regard to any regulation or contemplated regulation of entry, pricing or output, the basic principles embodied in the Federal Government's policy proposals entitled *Freedom to Move: A Framework for Transportation Reform* (1985). In particular, the Commission's examination of provincial and municipal regulation of gasoline retailing persuades it that the public would be better served if any government licensing decisions regarding new entry and proposed new offerings were guided by a test of "fit, willing and able" instead of "public convenience and necessity".

(b) The experience and knowledge of the office of the Director of Investigation and Research should continue to be made fully and openly available, through both private consultations and public hearings, to assist agencies, departments and officials of all governments in regard to such regulation of specific industries as may be thought necessary in the public interest.

(c) Aspects of the organization and performance of the downstream petroleum sector are of such general public interest and importance, that it would be desirable for federal and provincial governments to consult more systematically at senior levels in order to review industry performance and to coordinate their objectives and policies to the extent possible.

Recommendation No. 11: Restrictions on the importation of petroleum products into Canada should be avoided in order to promote competitive markets in Canada. To the extent that the Government supports continuation of a policy of open access it is important to let the industry know.

This would indirectly benefit consumers and would directly benefit potential importers and other wholesale buyers who are faced with decisions regarding investments in facilities or the duration and types of supply contracts into which they might enter.

Recommendation No. 12: Consumers should seek to strengthen their market position by drawing on their collective bargaining (or buying) power.

Many organizations, including automobile associations, could usefully explore the feasibility of obtaining price concessions on gasoline on behalf of their members in a similar way that this is accomplished by a number of organizations with respect to heating oil.

O.G. Stoner

Chairman

F. Roseman

Member

Ottawa
May 16, 1986

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Competition in the Canadian Petroleum Industry

Restrictive
Trade Practices
Commission

Canada

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May 16, 1986

Dear Minister,

I am transmitting to you the French and English texts of a Report by the Restrictive Trade Practices Commission entitled "Competition in the Canadian Petroleum Industry".

This Report follows from proceedings carried out under section 47 of the Combines Investigation Act relating to the exploration for, and the importation, production, purchase, manufacture, storage, transportation, distribution, barter, sale and supply of crude oil, petroleum, refined petroleum products and related products.

The Report is accompanied by an abridged version containing its introductory material and its conclusions and recommendations. Most of the appendices are contained in a third volume.

The Commissioners have sought to fulfill their mandate with respect to the inquiry into the petroleum industry and as well, address the relevance of their appraisal and recommendations to Bill C-91, the new competition legislation now before Parliament.

Yours sincerely,

O.G. Stoner
Chairman

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Preface

If new legislation proceeds as now drafted in Bill C-91, this will be the last report of a section 47 inquiry of the Restrictive Trade Practices Commission. While the Commission has been asked in previous years to look at some very large industries, none can match the petroleum industry for complexity, volatility, size and influence. Apart from Petro-Canada, the Canadian "majors" are affiliates of enterprises that operate on a worldwide scale and are essentially supra-national entities. The growth and success of these very large undertakings, matched by parallel opportunities for independent or small business, make an inestimable contribution to the economic well-being of Canada. However, as with almost everything else, there must be some checks and balances — in this case national policies that can balance private good and public need. This report is about one of the checks and balances — an effective competition policy.

The Director's inquiry in this matter began in 1973, and the proceedings before the Commission in 1981, with attendant demands on all those involved. The last five years have been exhaustive and exhausting for the Commissioners, and the entire inquiry must have been even more so for the participants. As a measure of attrition of the length of this process, only two of the four original Commissioners remain to complete and sign the Report. We are certain that retirement, mergers and even acts of God may have reaped similar losses with the petroleum companies and other participants.

Mr. R.S. MacLellan who sat throughout most of the hearings, while no longer a Member since May 1984, has been of great help and moral support. He has considered our findings and agrees with the thrust of the Report.

We were ably assisted in our work by a small but effective staff including an Executive Director, and by counsel. We are indebted to them for their assistance and perseverance — especially the tiny group who remained to the end. Without them, our task would have been impossible. However, the contents of the Report are the responsibility of the Commissioners. On all Conclusions and Recommendations excepting those dealing with the alleged overcharge prior to 1973, there was full agreement between us.

The Commissioners wish to express their appreciation to each of the many witnesses and organizations listed in Appendix B who, at considerable effort, inconvenience and no doubt expense to them, patiently educated the Commission about the many aspects of this complicated industry and about various specific events that have occurred. The evidence came from large and small businesses, from government bodies and from consumer organizations. In each case it has been studied in detail by the Commissioners and has almost invariably been useful, even though it has not been possible to recite the detail of all the evidence in the Report.

The last months of the Inquiry were marked by major developments in the Canadian industry and in government policies that gave rise to widespread political and public reaction. The Commissioners have sought to deal with these matters, including a specific request from the Minister of Consumer and Corporate Affairs in January 1986, within the context of its mandate.

The Commissioners, in addition to setting out their appraisal and recommendations to the Minister with respect to industry practices have also related these, where appropriate, to Bill C-91 — the new competition legislation now before Parliament — in the hope that this will be helpful to both the Minister and Parliament in addressing issues of growing importance to all Canadians.

In addition to the full Report, an abridged volume containing the Introductory Chapters and the Conclusions and Recommendations, and a third volume containing appendices, are being submitted concurrently.

The Commissioners are appreciative of the patience of those who await this Report and trust that its modest contribution will be of help to governments, to the public and perhaps, even to the industry itself.

A

Introduction

I

The Context, Mandate and Focus

1. Why An Inquiry?

The majority of Canadians are most acutely aware of the petroleum industry when they buy gasoline for their cars. Next to the weather, and perhaps taxes, few topics generate greater public comment than the prices of gasoline. It appears to many consumers that gasoline prices are established in markets that are insufficiently competitive. How else to explain why the pump prices at all service stations in a particular area are virtually the same and that those prices rise, and occasionally fall, in unison?

Despite the high visibility of the petroleum industry, it continues to have a certain air of mystery about it; it continues to be regarded by many with suspicion or skepticism. People wonder about the relationship between prices at the gas pump and crude oil prices. Do Canadian consumers pay more for their gasoline than their counterparts across the border in the United States? Why can pump prices be as much as 10-15 cents/litre(¢/*l*) higher in some provinces and municipalities than in others only a short distance away?

Whether or not they always realize it, those who ask the above questions are asking a more fundamental question namely, how much competition is there in the Canadian petroleum industry?

In Canada, the principal federal legislative instrument for protecting the public interest from anticompetitive conduct is the Combines Investigation Act — an Act "to provide for the investigation of combines, monopolies, trusts and mergers."

The Combines Investigation Act establishes two separate agencies for its administration: the Director of Investigation and Research, and the Restrictive Trade Practices Commission. As his title suggests, the Director is an investigator or "policeman". He conducts investigations in private and, on the basis of his assessment of the evidence and material he gathers, may recommend or initiate enforcement proceedings or other proceedings under the Act. People often confuse the role of the Director with that of the

Commission. During this inquiry the media has frequently described materials published by the Director as "reports" by the Commission. The Commission is entirely separate from the Director. The Commission acts as an independent review body or tribunal, not unlike a court in certain respects. It has certain responsibilities to report its assessments and recommendations to the Minister and is empowered in some types of proceedings (which this one was not) to make binding orders regarding certain types of distribution practices. In the performance of its responsibilities the Commission may, and did in this case, receive evidence in public from all interested persons.

The Act establishes the separate mandates and authorities of the Director and of the Commission. The sections of the Act under which this inquiry has been conducted provide in relevant part as follows:

> 47(1)(a). *The Director* upon his own initiative may ... carry out an inquiry concerning the *existence and effect of conditions or practices* relating to any product that may be the subject of trade or commerce and which conditions or practices are *related to monopolistic situations or restraint of trade*...
>
> 47(2). It is the duty of *the Commission* to consider any evidence or material brought before it under subsection (1) together with such further evidence or material as the Commission considers advisable and to report thereon in writing to the Minister, and for the purposes of this Act any such report shall be deemed to be a report under section 19.
>
> 19(2). The report ... shall review the evidence and material, appraise the effect on the *public interest* of arrangements and practices disclosed in the evidence and contain recommendations as to the application of remedies provided in this Act or other remedies.
>
> [Emphasis added]

The Act also makes provision for any six adult residents of Canada who believe a person (or company) has contravened or failed to comply with the Act or has done or is doing something remediable under the Act, to require the Director to conduct an investigation into the matter complained of. It was just such a "six citizen complaint" that led to the inquiry which is the subject of this Report.

In February, 1973, persons acting on behalf of the Consumers' Association of Canada requested that the Director investigate whether the gasoline and fuel oil price increases made a month earlier by a number of Canadian oil companies were the result of a conspiracy and to determine more generally, whether or not vertical integration had contributed to higher prices for gasoline and fuel oil.

The Director responded to the above application by launching a private and confidential investigation. When he began he could not have known what further proceedings, if any, might appear to him to be appropriate when his investigation was completed. His options, under the law, were to 1) discontinue the investigation, 2) submit evidence to the Commission, or directly to the Attorney General, for consideration as to whether criminal prosecution or other action should be instituted, 3) apply to the Commission for orders prohibiting certain types of conduct by specified persons or companies, or 4) submit evidence and material to the Commission for consideration under the provisions of section 47 of the Combines Investigation Act. He took the latter course.

The Director subsequently reported to the Commission that in the course of conducting his investigation he had exercised his statutory powers and had seized a large number of documents from the premises of several petroleum companies in 1973, 1974 and 1978. In 1975 he had examined several witnesses under oath, and in 1976 had obtained written returns of information from over 90 petroleum and pipeline companies. In addition, interviews had been conducted with gasoline and fuel oil dealers. Other information had been gathered from a range of public sources. Following the above investigative actions, the Director prepared a seven-volume "Statement of Evidence and Material" or "Green Book".

On February 27, 1981 the Director submitted his Green Book to this Commission pursuant to section 47 of the Act. That Green Book, entitled "The State of Competition in the Canadian Petroleum Industry" contained almost 1,400 pages of printed text. It was supported by approximately 100 volumes of seized documents and other materials. It reported on the Director's investigation relating to "the exploration for, and the importation, production, purchase, manufacture, storage, transportation, distribution, barter, supply and sale of crude oil, petroleum, refined petroleum products and related products."

The Commission is required by statute to consider the evidence and material received from the Director, together with such further evidence or material as it considers advisable, and to report its appraisal and recommendations to the Minister of Consumer and Corporate Affairs. It is important to appreciate the nature of a section 47 inquiry. Although much of the evidence and argument often relates to company conduct or government interventions and their respective consequences, a section 47 inquiry is essentially an examination of the workings of the market or markets involved. It is not a trial, not an adjudication of rights. No binding orders are being made adverse to someone's interests. The Commission's report is advisory. Decisions as to what action to take, if any, are the responsibility of the

Minister, the Government and law enforcement officials, and not the Commission.

The Green Book as submitted to the Commission in 1981 (and various press releases issued to the media by the Director shortly thereafter), represented nothing more than the Director's statement of what he believed, on the basis of such evidence as was available to him at the time, that he could "prove" in subsequent proceedings. At the time the Green Book was submitted to the Commission it was still a confidential document. No one had yet had a chance to challenge his understanding of the facts, or his analysis. His Green Book might be likened to a statement of a prosecutor's or a plaintiff's case.

As is indicated by the long formal title of the Director's material, the Green Book explored a broad spectrum of industry activities including the offshore and domestic supply of crude oil to Canadian refiners, shipping and pipeline transport of crude oil to the refineries, refining in Canada, and the distribution of refined product, particularly gasoline, to end users in Canada. In the broadest terms the Director concluded, on the basis of his private study of the material available to him, that there were conditions and practices in each sector of the industry that were undesirably monopolistic and restrictive, and that the fact that the same major firms were "dominant" in each of the sectors facilitated and magnified the effect of the undesirable practices.

Although the Green Book and the media reports following its release, focused on the conduct of a number of Canada's petroleum companies, the Green Book also reported on the Director's review of certain government policies which he believed had lessened competition in the industry.

Although the Director's Green Book dealt almost exclusively with facts and circumstances in the period 1958 to 1973, the Director reported in the Green Book, in 1981, that "the Director's experience with the petroleum industry right up to the present has confirmed that the issues that were important when the petroleum inquiry commenced in 1973 remain important today". He proposed 12 recommendations to the Commission that in his view were required to deal with "the monopolistic conditions and practices in restraint of trade that he found".

As has been stated, the Director's inquiry was conducted in confidence and the Green Book was confidential when it was submitted to the Commission. However, the contents of the Green Book and in particular petroleum pricing, involve subjects of intense and quite proper, public interest and concern. A wide range of persons, not the least of whom were the large petroleum companies who were subjected to criticism in the Green Book, had an interest in the Director's study and in his recommendations. In view of the widespread interest in the operations of the petroleum industry and the broad issues raised in the Green Book concerning both energy policy and competition policy, the Chairman of the Commission ordered, pursuant to section 27 of the Act, that the Commission would hear evidence and receive comment and submissions in public. In the view of the Chairman and the Commission it was imperative that the petroleum companies and all other interested persons, including federal and provincial government agencies, have the fullest opportunity to present evidence and to comment regarding the Director's work and, perhaps more importantly so far as current and future public policy is concerned, regarding the post-1973 developments in both the upstream and downstream sectors which had not been addressed at any length in the Green Book.

The true nature or status of the Green Book was lost in the publicity which followed its release. Its publication was immediately followed by media reports that Canadian consumers had been "ripped off" (a term not used in the Director's statement of evidence) over a long period of time by Canada's major petroleum companies. There was an immediate outcry in Parliament and elsewhere as a result of the Green Book's allegation that Canadian consumers had been "overcharged" some 12 billion dollars by the oil industry and that the "overcharge" was continuing. The oil companies implicated in the Green Book immediately responded through their own media campaigns to deny that they had been involved in any illegal or unethical conduct. Various interest groups interpreted the Green Book and the media reports from their own, self-serving, perspectives.

The extreme and adversarial nature of some of the Director's criticisms and conclusions, and the way in which the Director had publicized them, resulted in the proceedings before the Commission being of an adversarial nature throughout.

The Commission's interest in a section 47 inquiry would normally be confined to matters of current and future concern, extending to historical information and material only so far as that was helpful to an understanding of the present. In this case, however, very serious criticisms of some petroleum companies, and to a lesser extent of governmental policies, were made by the Director relating to incidents, policies and practices that existed in the 1960s and 1970s, and sometimes in a form that inflamed public opinion when the Green Book was published. Considerations of fairness alone required that the fullest opportunity be given to those criticized to respond in detail, and for others who wished to support the Director's position to do so. Further, the Commission felt that it owed the public its judgement as to what the evidence demonstrated about the criticisms after all the responses had been heard. This added considerably to what the Commission's task would normally have been because the relevant documentary evidence was extensive, but the reputations of companies who continue to solicit the business of consumers were involved. Thus the Green Book took on an importance greater than Statements of Evidence submitted to the Commission in earlier section 47 inquiries.

Over the years there have been various inquiries of one form or another into aspects of the petroleum industry in Canada. Some have been carried out by provincial bodies, some by federal bodies and, indeed, others have been carried out into very specific matters by this Commission. These reports were all reviewed with benefit by the Commission. Their work was not duplicated. None of those earlier studies, however, had the comprehensive scope of this inquiry or the general interest, given the inescapable fact that gasoline was roughly 11¢/*l* in 1971 and 50¢/*l* in 1985. Today, the interest of Parliamentarians, the public and the media is on falling world crude oil prices and on the relationship between those prices and retail product prices.

2. Conduct and Procedures of the Hearings

In view of the broad and complex subject matter of its proceedings, and in order to facilitate meaningful participation, the Commission took certain steps to ensure a full and fair opportunity for all who wished to respond to or to supplement the Green Book or other evidence, to do so. The Commission also realized that defining issues and making the hearings efficient was important. Following a general organizational pre-hearing conference held in July, 1981, the Commission adopted Rules of Practice and Procedure for its proceedings, one of the provisions of which was that the substance of all testimony to be given would be communicated in writing, in advance, to all persons who wished to receive advance notice for purposes of preparing cross-examination or other evidence. Second, after hearing opening statements, the Commission held hearings in various centres across Canada from December, 1981 to February, 1982 in order to facilitate the participation of local groups who wished to be heard and also to learn the range and degree of urgency of concerns, if any, that existed in any part of the country regarding the functioning of any aspect of the Canadian petroleum industry. These hearings, like the Commission's hearings generally, were publicized by advance notice in newspapers and other media.

The complaints heard during the regional hearings at the outset of the inquiry gave the Commissioners some initial insights into the grass roots' perception of their role. The early hearings, at which gasoline and heating oil dealers and their associations gave evidence, set a pattern for the highly adversarial nature of the inquiry and gave notice of emotional undertones that were to run throughout its duration. Some of the issues raised during the regional hearings were outside the Commission's mandate; nevertheless, they served to expose the Commission to a lot of basic information about the way in which the industry operates. Consumers also had a chance to make their views known. Quite understandably, their resources and information were limited in relation to those of other participants.

Finally, it was clear that the pulse of the nation, if difficult to detect, was only of diagnostic value in proving that the patient was simply a bionic reproduction of several widely differing interest groups. In all of this, there was nothing new, and the Commission was obliged to look elsewhere to fashion its approach to the rest of the inquiry and in particular, to the preparation of its Report.

When it moved to Ottawa, the Commission, in interests of efficiency and economy, organized its hearings, so far as possible, into the subject-matter phases of the international, refining and marketing sectors in that order. Within each such phase of the hearings the Commission heard evidence first from the Director, then from other persons who were not refiners, and finally from the refining companies who were by then more fully familiar with the various criticisms being made of them and had a fairer opportunity to answer. Where witnesses whom the Commission felt would be helpful to it had not testified in the course of this process, the Commission itself arranged for them to testify.

The fact that inquiries are public tends to increase the scope of the evidence heard. While the Director is responsible for preparing the initial "material" to be heard by the Commission, interest groups and members of the public who are not the Director's witnesses often wish to be heard as well. An inquiry which is initially complex and broad is likely to be made more so by the participation of the public, including members of the industry who would like to bring a complaint before the Commission or to express a point of view. As in the case of other evidence, it was often difficult to decide beforehand whether or not these interventions would be useful in the determination of the essential issues.

The Commission held over 200 days of hearings and heard evidence from over 200 witnesses. The transcript is over 50,000 pages long. The record includes approximately 1,800 exhibits, many of which were lengthy and complex and one of which consisted of approximately one hundred volumes of documents that had been referred to by the Director in the Green Book.

Although the Commission used its power to subpoena witnesses as required in the course of the proceedings, it generally received full cooperation throughout from the petroleum companies, from federal and provincial government agencies and, indeed, from most of those who appeared and from whom the Commission sought assistance. Each of the major petroleum companies presented comprehensive and detailed evidence through senior and experienced officials and personnel, all of whom submitted to extensive questioning by the Director, by the Commission and by others. The petroleum companies and many witnesses have also in large measure answered further Commission queries and requests for information in writing without delay.

Proceedings under section 47 have always been public, although evidence deemed to be confidential has been taken in private from time to time, upon application. The extent to which evidence received in private has been revealed has been guided by balancing the public's interest in knowing the facts against possible harm to the parties and to competition. Reports have always been made public in their entirety, which is the case with this Report. Care has been taken to avoid a violation of commercially sensitive information unless it was required for the essential needs of the Report.

Most of the hearings were open to the public. On a few occasions the Commission agreed with requests of witnesses that they should not be required to share with their competitors, or with others, certain confidential business strategies or policies. When the Commission heard evidence on those particular topics *in camera*, where an *in camera* session appeared to be the best way to meet the procedural objectives of fairness and efficiency, this was done with the general understanding that the Commissioners would subsequently review the evidence given in those sessions and, after providing an opportunity for further submissions, would place on the public record those portions of the evidence where aspects of the public interest or specific competition issues were raised so that all participants would be informed and could respond. Thus a general descriptive statement of the portion of the evidence that remained on the confidential record was made public in a form satisfactory to the Commission, to the Director, and to the person or persons whose private information it was.

Following the hearing of all the evidence on substantive matters, the Commission received written arguments regarding those matters from the Director, from others who had criticisms of the refining petroleum companies, and from the refining petroleum companies, in turn. The written submissions were lengthy and detailed and greatly assisted the Commission.

3. Mandate and Focus

The Commission's mandate is set out in the words of the Combines Investigation Act (and more particularly in this proceeding, under section 47 of the Act.)

Commission proceedings under section 47, concern "the existence and effect of conditions or practices relating to any product that may be the subject of trade or commerce and which conditions or practices are related to monopolistic situations or restraint of trade."

Even a casual examination of the language of sections 47 and 19(2) of the Act reveals that the Commission's mandate is set out in very broad and general terms. It is left to the Commission to interpret and define more precisely the terminology of the Act. In the Commission's view there are certain essential tasks it must perform. The first is to determine whether or not there is in fact a monopolistic situation or a restraint of trade. The second, is to determine whether or not the monopolistic situation or restraint of trade has an appreciable effect on the marketplace. Finally, it must decide whether there are reasonable applications of or changes in public policy that it could recommend which could eliminate or reduce the constraint or otherwise compensate for its effects.

These elements are colored by the requirement that the Commission "appraise the effect on the public interest" of the practices or arrangements in question. The Commission's view of the public interest must be guided by the context created by the Act. Nevertheless, it cannot ignore or treat in a cavalier fashion other public interest issues or other policy objectives of governments. In short, in seeking to carry out its mandate, the Commission must recognize that policy makers are often faced with conflicting public policy objectives and must balance or trade off these conflicting objectives.

With respect to the first of the three steps referred above, it is often difficult to determine whether a monopolistic condition or a restraint of trade exists. The answer is rarely obvious and there is usually much scope for judgement to be exercised. For example, the practice of consignment selling[1] discussed later in the Report can be viewed as a mechanism by which the oil companies provide financial support to their dealers during periods when pump prices have fallen below normal levels, perhaps during a price war. Alternatively, the same practice might be interpreted as a procedure through which the oil companies gain the right to set retail prices for their own purposes. It may also be seen as having both effects. The Commission must then decide whether or not it can generalize about the balance of effects of the practice, or whether or not the practice is only harmful under certain market conditions and whether or not these conditions can be easily identified.

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[1] Under consignment selling the refiners retain ownership of the gasoline and the dealers, acting as their agents, receive a per-unit commission.

The second requirement in a section 47 inquiry is to decide on the degree to which the condition or practice in question affects competition in the marketplace. Isolated events which are not likely to recur, or those with marginal effects, are unlikely to be seen as requiring remedial action. There is a major strand running through the Act, which is the prevention of reductions in competition to a material degree. The presence of qualifiers such as "unduly" and "substantial" suggest that as a matter of public policy actors in the marketplace should be left alone unless there is an appreciable adverse impact on competition. The one possible exception to this general working principle is where the conduct in question, in the Commission's view, has no redeeming features from a public policy viewpoint.

For either or both of the first two requirements to be satisfied, the Commission must conclude that the condition or practice will create, increase or entrench *market power* — the power to limit supply and thus to increase prices. The potential for such control to exist is present when sellers are few and can easily have a meeting of minds on prices, when buyers are many and without bargaining power or good information, when supply cannot readily be increased through imports, when close substitutes do not exist, and when growth of smaller competitors or the entry of new firms is difficult. These are the criteria which are used in appraising or evaluating the market conditions against which the practices investigated in the inquiry have been assessed.

Churchill once suggested that facts are like butterflies — the last person to perceive them in full flight has the edge on their color and shape. While the factors underlying market power are easy to set out, there are often wide differences of opinion regarding their relative importance. They are also often difficult to evaluate in practice and are best viewed in an historical, dynamic context rather than as a snapshot frozen in time. Speaking generally, the weight to be given to the number of large competitors in creating market power has been in a state of flux in the legal/economic literature for a number of years. The same is true regarding what constitutes barriers to new entrants. While the Commission must recognize the changes in legal and economic concepts and the empirical studies associated with the identification of the variables that are important factors in creating, preserving or enhancing market power, at the end of the day it must be pragmatic and draw on the specific facts before it in forming its judgements.

Market power is one side of the proverbial coin. It is widely recognized that certain types of conduct can increase control over supply and price. It is also recognized that the same conduct can lead to the benefits of greater efficiency. This consideration must be taken into account when first evaluating whether the conduct or situation is indeed monopolistic. It recurs when consideration is being given to whether or not remedies should be recommended. The Commission must decide whether the effects on market power or on cost reductions dominate. The supply characteristics in the refining industry — large plants with high fixed costs — raise precisely those questions which involve the dual considerations of market power and efficiency. At what point would the public interest benefit more from having a larger number of competitors in a market than it would from having fewer competitors with larger, more efficient refineries? To what extent does the interest in reducing the risk, and cost, of the enormous capital investment that refineries require, justify long-term supply arrangements which tend to foreclose these markets to existing or potential competitors? In general terms, how responsive is the industry to forces of change, and would restraints on the industry's flexibility to adjust have a sufficient public-interest justification? These questions call for judgements that cannot, unfortunately, be reduced to simple quantitative calculations and comparisons of "costs" and "benefits". They must be made on the basis of information that is rarely free from ambiguity and which sometimes leaves room for reasonable differences of view.

This approach to evaluating particular situations or types of conduct obscures certain characteristics of the present inquiry which it shares with many of its predecessors. The practices cannot be evaluated in isolation. They must be examined against the background of other practices, the environment created by many government policies, and by international market forces. In reaching its conclusions and recommendations, the Commission has given considerable attention to government policies in order to see whether or not they create impediments to the smooth functioning of markets.

Furthermore, the Commission's role is not to protect individual competitors but rather to protect and promote competition. As a result, the Commission's mandate does not call for it to come to the assistance of or to protect a particular individual, group or company having a difficult time as a result of acceptable competitive tactics by competitors in the marketplace. No one should expect therefore that a report such as this will recommend protection or special advantages for particular participants facing legitimate competition.

Competition may mean very different things to different people, and unless care is taken to use the word precisely, it can frustrate communication and obscure analysis. *Price competition*, in the sense in which it is something in the public interest, represents a *process* by which prices are set. The actions by business rivals place an upper limit on the prices a firm can charge for its products. More importantly, such actions by rivals continuously pressure a firm to lower its costs in order that the highest prices the market will permit it to charge enable it to earn a sufficient return on investment to attract investors. This market condition requires that competitors continuously seek to attract business away from each other by price and other means and in turn, this usually requires a reasonable number of competitors. In competitive markets the prices of the various competitors inevitably tend towards the same levels because all available cost-saving techniques will be adopted by all the (surviving) competitors.

This is very different from saying that if prices of the firms in the market are approximately the same they are therefore, for that reason, "competitive" prices, and yet, on many occasions throughout the inquiry witnesses used the word "competition" in this superficial sense. Such a limited concept, characteristic of persons satisfied with "established" market shares, means only that the company prices at a level that prevents others from taking away its business. There is little or no striving for improvement in this concept of "competition"; it characterizes stagnant behavior by someone who merely wishes to preserve an established position, and implies a power and ability to set one's own prices with less regard for pressures from others than would be in the public interest. There are no, or at least insufficient, downward price pressures on costs.

Competition means therefore an effective functioning of markets which promotes and requires rivalry amongst competitors for the business of consumers. An effective functioning of markets also permits smaller competitors to expand if they meet the test, and the entry of new competitors and new ideas. Technological change and innovation are the large levers of competition in industry. They are sources of creative destruction by which monopolies or inefficiencies are destroyed and new entrants and greater efficiency are encouraged.

Nor does the proper meaning of "competition" leave room for notions about "fair" price levels. Businesses are not entitled to "fair" prices or to "satisfactory" profits. If they are relatively innovative, or reduce costs sufficiently, there will be a sufficient margin between the highest price the market will permit them to charge and their own costs that they will deservedly earn large and even very attractive profits. They are entitled to those prices and profits until others enter, perform as well or better and compete those profits to lower levels. Those who cannot make the grade on a continuing basis leave the industry. Consumers do not owe them a sinecure. This is the basic function of prices and profits and the way in which they allocate resources in a market economy. It is, of course, dependent upon the elimination of unjustifiable barriers to entry.

Similarly, consumers are not entitled to "fair" price levels, but only to prices set by a competitive process. The latter clearly are in the best interest of consumers.

Finally, an inquiry and particularly a public inquiry, quite understandably, can give rise to a host of issues and a long list of complaints. Many of these may have little or nothing to do with competition and hence are not relevant to the Commission's mandate. For example, it is not the Commission's role to settle a specific contract dispute between a buyer and a seller or a particular dispute between a landlord and tenant. In Chapter III the Commission indicates, from amongst the breadth of concerns and recommendations presented to it during the inquiry, the relatively few that it considers to lie outside its mandate.

Before moving to other sections of the Report and to its Conclusions and Recommendations, the Commissioners considered it would be helpful to provide the reader with a brief layman's overview of the Canadian petroleum industry and then to outline the concerns and views of participants.

II

An Overview of the Industry

1. Introduction

The purpose of this "Overview" is to introduce the "lay" reader to the petroleum industry in Canada as background to the issues examined in the Commission's Report. The stages of production and distribution in the industry and their geographic location in Canada are described together with the relationship of the Canadian industry to the international industry and the evolution of domestic government policies, many of which have been introduced and amended in response to international pressures. Throughout this description an attempt is made to highlight the main industry trends. More specific industry, market and firm data are dealt with in the body of the Report. This chapter presents the canvas on which these details are painted.

The Canadian petroleum industry encompasses the exploration for crude oil and other hydrocarbons, their production, transportation and refining as well as the marketing of refined petroleum products in Canada such as gasoline, diesel and heating oil. Each of these sectors is somewhat unique in terms of the physical production process, the methods of distribution, the product's end use and the market forces that affect distribution. The principal end uses of petroleum products are as energy for transportation, for generating electricity and driving industrial machinery, for home and industrial heating, and in the manufacture of petrochemicals, lubricating oils and asphalt.

An important characteristic of petroleum products is their relative homogeneity. For example, most consumers are indifferent as to the brands of gasoline used in their cars or heating oil used in their homes. This has allowed refiners to distribute gasoline and heating oil under their own brand names, and at the same time, to supply products from the same tanks both to competing refiners under exchange agreements and to marketers who then distribute them under their own brand names. In short, gas is gas. This little explored aspect is addressed in Chapter XIII.

Parts of the Canadian petroleum industry are highly concentrated with a small number of firms accounting for a large share of the market. Most of the larger firms are vertically integrated with firms operating in more than one sector of the industry from the exploration for crude oil to the distribution of refined petroleum products. The level of concentration does, however, vary by industry sector, being highest in trunk pipelines and refining. A concern of public policy is that this combination of vertical integration and high concentration, which has emerged at least partly for reasons of efficiency in production and distribution, results in market power that can have adverse effects for consumers and society.

Numerous firms participate in the industry as crude oil producers, refiners and distributors. The largest and most widely known firms are the eleven refiners[1], the majority of whom are wholly or significantly foreign-owned, namely:

Company	**Foreign Shareholder**
Chevron Canada Limited	Chevron Corporation
Consumers' Co-operative Refineries Limited	
Husky Oil Operations Ltd	
Imperial Oil Limited	Exxon Corporation
Irving Oil Limited	Chevron Corporation
Petro-Canada	
Shell Canada Limited	The Royal Dutch Shell Group of Companies
Suncor Inc.	Sun Company, Inc.
Texaco Canada Inc.	Texaco Inc.
Turbo Resources Limited	
Ultramar Canada Inc.	Ultramar PLC

All 11 firms are integrated forward into marketing, and many are integrated backwards into crude oil exploration and production as well. Smaller firms also participate in the crude oil production and marketing-distribution sectors of the industry.

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[1] Petrosar Limited, owned by the Federal Government, operates a petrochemicals refinery in Sarnia, Ontario. It produces some gasoline and heating oil as byproducts of petrochemical production.

The trunk pipeline systems, carrying Canadian crude oil eastwards and westwards from Alberta, are owned respectively by Interprovincial Pipe Line Limited and Trans Mountain Pipe Line Company Ltd., each of which is partially owned by some major refiners.

2. Stages of Production and Distribution

The various sectors of the industry from crude oil production through refining to marketing and end use are shown in Figure 1. Transportation and storage facilities link the sectors with pipelines, ships, railroad tank cars, trucks and related terminal facilities. Crude oil exploration and production are the "upstream" activities, while the refining and marketing of petroleum products constitute "downstream" operations. The economic structure of each sector varies. There are more producers "upstream" than in refining, due primarily to scale economies in refining which limit the number of efficient size plants needed to supply the Canadian market. Marketing is undertaken through numerous wholesale and retail outlets such as gasoline stations and heating oil distributors, but many of these small business operations are either owned by or tied to refiners through complex franchise agreements and other supply arrangements.

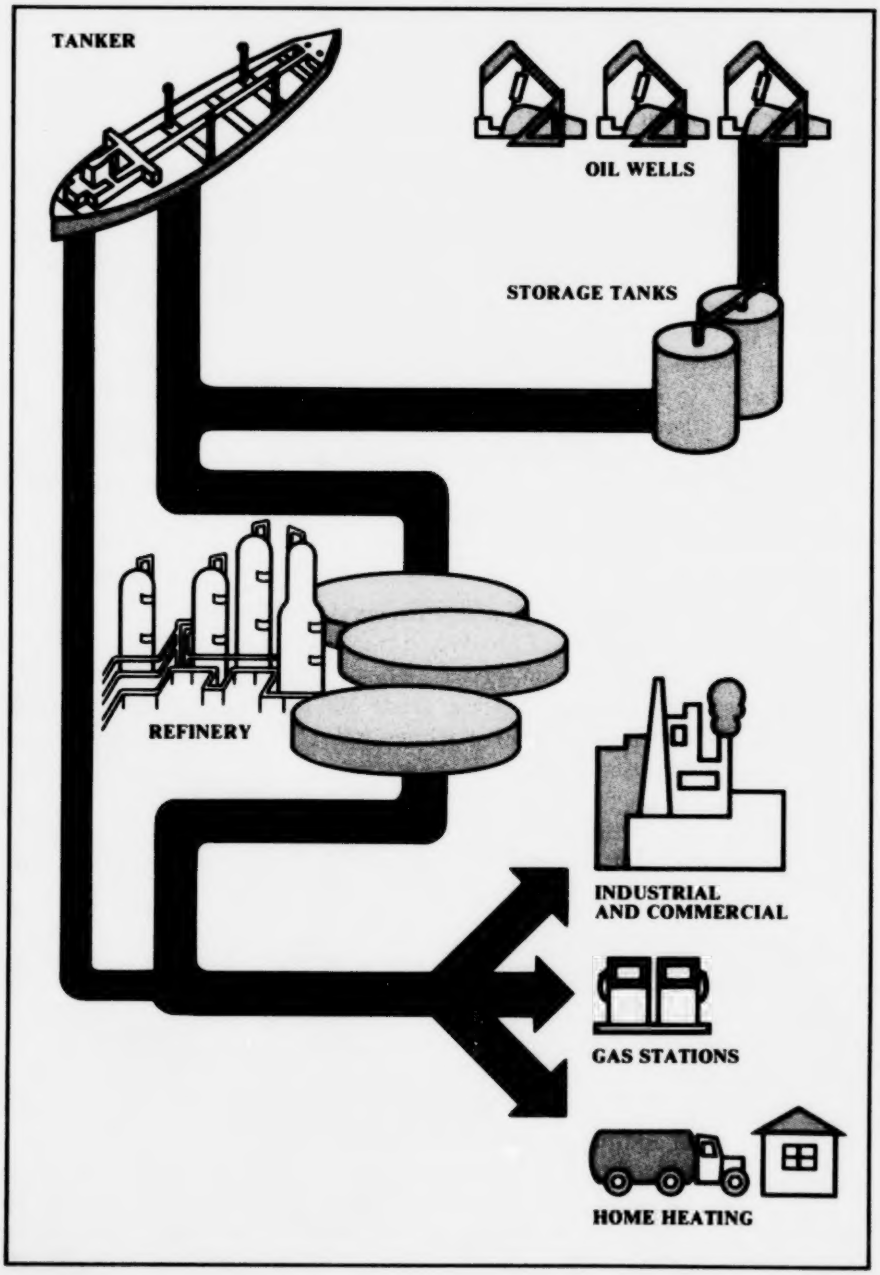
Scale economies in operating a pipeline similarly dictate the need for only a few operating companies in Canada and thus high concentration in order to provide efficient transportation services. The overall structure of the industry might be thought of as an hourglass; crude oil flows from many producers through a few firms owning trunk pipelines and refineries and out to a larger number of firms distributing the refined products.

The upstream sectors of crude oil production and pipelines are partially tied to the needs of the domestic industry and partially to export markets in the U.S.

The "upstream" and "downstream" sectors handle liquids, which must be contained from the time they leave underground storage in oil wells or deposits, until they arrive as manufactured products at the end users' storage facilities, such as the gas tanks of cars, trucks, ships, planes and trains, or the heating oil tanks of homes, offices and factories. There is clearly a limit to the amount of liquid that can flow through the system at any one time, and the installation of additional capacity takes time.

The successive stages of flow from crude oil production through to product marketing need to be coordinated in order to optimize capacity utilization throughout the system as a whole and to reduce operating costs.

FIGURE II-1.
Stages of Production and Distribution


TANKER
OIL WELLS
STORAGE TANKS
REFINERY
INDUSTRIAL AND COMMERCIAL
GAS STATIONS
HOME HEATING

Coordination is undertaken either by purchases and sales between independent firms, or by internal decisions made by vertically integrated firms.

3. Location and Industry Trends

The "upstream" industry is located primarily in Western Canada, with about 85 per cent of Canada's annual crude oil production occurring in Alberta over the past decade. More recently, extensive exploration and production has been taking place in the Arctic and offshore in Eastern Canada. The "downstream" refining segment of the industry is spread across Canada.

(a) Crude Oil Production and Reserves

Prior to the Leduc, Alberta discovery by Imperial Oil in 1947, there was relatively little crude oil production in Canada and refineries were supplied mainly with imported crude oil. Thereafter, domestic production of conventional crude oil expanded rapidly in the 1960s and 1970s reaching a peak of 635 million barrels in 1973 before declining to 465 million barrels in 1984, a decrease of 27 per cent from a decade earlier. Additional production comes mainly from synthetic (tar sands) crude oil and reached about 50 million barrels in 1984. Total production reached 515 million barrels or 1.4 million barrels per day in 1984, less than estimated production capacity of 1.5 million barrels per day and reflecting shut-in or unused capacity.

The estimation of Canada's oil reserves is difficult to forecast because of changing costs, prices and policies, uncertainty about future discoveries and the variety of crude oil sources. In addition to reserves of conventional and synthetic crude oil, some oil is produced as a by-product of processing natural gas. Some light oil can be produced by upgrading heavy oil as in the proposed Lloydminster and Cold Lake thermal recovery projects. Discoveries have also lead to reserves in frontier areas such as the Hibernia offshore field in Eastern Canada, the Beaufort Sea and the Arctic Islands.

The National Energy Board (NEB) forecasts that productive capacity will be marginally lower in 1995 (1.4 million b/d) relative to 1984 (1.5 million b/d). The relative importance of different sources of crude oil will change with synthetic crude oil, frontier production and light oil produced from upgrading heavy oil, being much more important in 1995 than in 1983. Correspondingly, conventional crude oil, which accounted for 83 per cent of productive capacity in 1983, is forecast to account for less than 50 per cent of capacity in 1995 as reserves of conventional crude oil dwindle, even assuming some further discoveries.[2]

(b) Pipelines

In 1984, Canada had a pipeline network consisting of almost 40,000 kilometres of trunk, gathering and product lines. The main expansion of the network took place up to 1980. As illustrated on the map inside the back cover of this Report, major crude oil pipelines ship Alberta crude oil westwards to Vancouver via the Trans Mountain Pipe Line, and eastwards to Ontario, and more recently into Quebec, via the Interprovincial Pipe Line. Offshore crude oil is imported into Eastern Canada by tanker and through Portland, Maine, by pipeline to Montreal. As well, there are product pipelines, such as the Trans-Northern Pipe Line linking Toronto, Montreal and Ottawa, two pipelines between Sarnia and Toronto, and the Alberta Products Pipe Line between Edmonton and Calgary. An Interprovincial pipeline formerly used to ship crude oil is now used to ship products. The conversion of the Interprovincial line allowed some refineries on the Prairies to be closed and many Prairie markets to be supplied with refined products by pipeline from Edmonton. A similar situation could develop in the future in B.C. with the closure of Vancouver refineries and the shipment of products from Edmonton. At present the Trans Mountain Pipe Line carries products mixed in batches with crude oil from Edmonton as far as Kamloops.

(c) Refining

The location of Canada's 25 operating refineries in 1985, as well as those closed in recent years, are shown on the map at the back of this volume.[3] Some refineries are located close to crude oil supplies, as in Alberta. Others, in the Atlantic region and Quebec, are situated on tidewater and accessible to tankers. A third group, mainly in Ontario and near Vancouver, are supplied with crude oil by pipeline from Western Canada and are located close to large product markets. Two refineries now mothballed, at Point Tupper, Nova Scotia and Come-By-Chance, Newfoundland, were built primarily as export platforms using imported crude oil and exporting largely bunker fuel to the U.S.A. Conditions in the U.S. market led to their demise.

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[2] There is no unqualified statement that can be made about how long Canada's oil reserves will last. A clear discussion of the issues can be found in the Economic Council of Canada's *Connections, An Energy Strategy for the Future* (Ottawa, Minister of Supply and Services, 1985), pp. 27-36.

[3] Not included in the 25 are two asphalt refineries, one owned by Petro-Canada at Moose Jaw, the other owned by Husky at Lloydminster, and Petrosar's primarily petrochemical refinery.

Canadian refining capacity increased two and half times between 1950 and 1960, and then again between 1960 and 1980 with the increased demand for petroleum products. This expansion was fed by the increased availability of domestic crude oil supplies, due in part to the Federal Government's National Oil Policy. This was followed by a decline in demand and by the closure of several refineries amounting to a decline of 13 per cent in capacity by 1984. The number of refineries grew from 31 in 1950 to 44 in 1960, and then declined to 25 in 1985. Over time, the average refinery size in Canada has increased as smaller refineries have been closed and larger ones built.

The utilization rate of refining capacity in Canada averaged over 85 per cent from 1950 to 1980. In the 1980s the rate has fallen, averaging 75 per cent for the years 1982 to 1984. Lower utilization has occurred despite the closure of 10 refineries since 1982, representing over 375,000 barrels per day or 18 per cent of Canada's 1982 refining capacity. The most recent refinery closure, that of the Gulf refinery in Montreal in 1986, has raised particular questions about the adequacy of petroleum product supplies, including heating oil, in the Province of Quebec. This issue is addressed by the Commission in Chapter XIX. It may be noted however, that Canada is not alone in experiencing refinery closures; it is estimated that about one third of global refining capacity has been closed in recent years.

(d) Consumption – Prices and Products

Petroleum products are consumed in one way or another by all Canadians. Major changes occurred in consumption patterns in Canada and elsewhere as crude oil prices rose sharply in the 1970s, and further changes can be expected as prices continue to fluctuate.

Oil consumption rose in Canada between 1950 and 1980. However, with the sharp oil price increases in the 1970s, other forms of energy were increasingly substituted for petroleum products. As well, overall demand for crude oil was depressed following the recession of 1981.

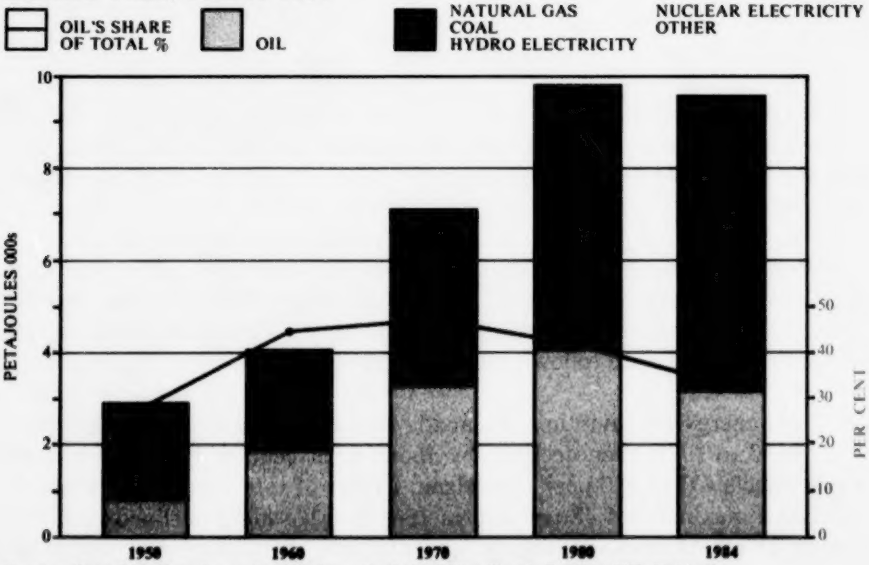
Total energy consumption in Canada rose almost three and a half times from 1950 to 1980, then declined by about 6 per cent by 1983 and in 1984 was still below the 1980 peak. Petroleum's share of total energy consumption reached a maximum of 48 per cent in 1965 and has since declined to 33 per cent in 1984. As shown in Figure 2, in absolute terms Canadian petroleum consumption reached a peak in 1979, and fell by almost a quarter by 1984.

Changing product demand led to changes over time in the yield of refinery products. In recent years, the main trends have been the increasing relative importance of motor gasoline and diesel at the expense of fuel oils (Figure 3). Conservation and the substitution of non-petroleum products such as natural gas, electricity and even wood for heating, have been responsible for changes in the slate of products produced.

Until 1950, Canadian refineries were heavily dependent on imported crude oil. Subsequently this changed and by 1984 Canadian produced crude oil accounted for 83 per cent of Canadian refinery feedstocks, compared with 24 per cent in 1950 and 9 per cent in 1947. Imported crude oil was replaced in most of Ontario by Western Canadian crude oil under the National Oil Policy instituted in 1961, after which imports supplied only markets east of the Ottawa Valley line. Canada has also been an exporter of crude oil, mainly to the U.S., and at various times has been both a net importer and a net exporter of crude oil and refined products.

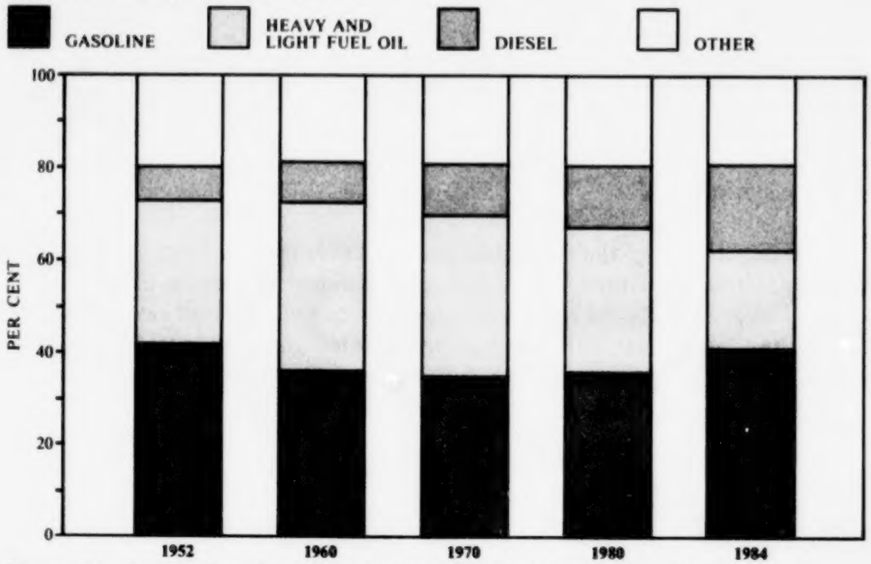
Two dimensions of the price of crude oil need to be considered, the absolute price level and the price of crude oil in Canada relative to the international price. The Canadian industry has had to respond to both

FIGURE II-2.
Canada — Energy Consumption By Source,
Selected Years, 1950 to 1984



Source: Canadian Petroleum Association, *Statistical Handbook*, Section VII, Table 4.

FIGURE II-3.
Canada — Yield of Refinery Products By Volume,
Selected Years, 1952 to 1984



Source: Canadian Petroleum Association, *Statistical Handbook*, Section VIII, Table 7.

aspects of prices. Prior to the early 1970s Canadian oil prices exceeded international prices. International prices then rose much faster than Canadian prices due to the actions of the OPEC cartel and restraining actions taken by the Canadian Government. By 1980 the Canadian price of oil was well below the international price. However, during the 1980s Canadian prices were allowed to approach international prices. The two were roughly equal by 1985, and the present price changes in Canada and abroad are taking place from similar levels. One of the reasons for the lack of synchronization of conditions in the Canadian and international oil markets has been government policies which have at times protected Canadian producers from lower priced imports, while at other times protecting consumers in Canada from higher domestic prices.

The more familiar price to Canadian consumers is the price at the gas pump. The average retail price of regular leaded gasoline in Canada climbed from 11¢/*l* in 1971 to 16¢/*l* in 1975, to 26¢/*l* in 1980 and to about 55¢/*l* in January 1986, a more than threefold increase over the past decade. Gasoline prices vary by province, tending to be highest in Newfoundland and lowest in Alberta, due in part to differences in provincial consumption taxes.

(e) Distribution – Gasoline and Heating Oil

There have also been substantial changes in the methods of distributing petroleum products, especially gasoline. Some of these changes are of an organizational nature altering the way in which gasoline is sold and the types of contractual relationships between refiner and retailer. The similar external appearance of gasoline stations hide the many different contractual links affecting the station operator. Changes in the service and maintenance requirements of automobiles have also profoundly affected the operations of gasoline stations.

The importance of the retail gasoline market is evident from the fact that motor gasoline accounted for 42 per cent of refiners' volume of petroleum product sales in 1984. Most of the gasoline was sold through retail gasoline outlets (84 per cent) with the remaining sales going to commercial and institutional customers including agriculture, commercial transport and government.

In 1980 there were approximately 24,000 retail gasoline outlets in Canada, a decrease of one-third from 36,000 in 1970. The four major refiner/marketers[4] (Imperial Oil, Shell, Gulf and Texaco) accounted for 59 per cent of the outlets in 1980, down from 64 per cent in 1970. The decreased number of outlets and the increased demand caused the average annual volume of gasoline sold per outlet to more than double from 600,000 litres in 1970 to 1.3 million litres in 1980.

Retail outlets "fly the flag" of either a refiner who markets across the country, a regional refiner, or an independent marketer,[5] including cross-merchandisers. The acquisition of three regional refiners by Petro-Canada since 1979 created a fifth major, joining Imperial Oil, Shell, Gulf and Texaco. With Gulf's sale of its downstream assets west of Quebec to Petro-Canada in late 1985, the number of national integrated firms or majors has again been reduced to four.

In the last 20 years or so the changes in the retail gasoline market have included the introduction of second brands by most refiner/marketers, an increase in the number of outlets directly operated by refiners, the development of self-service outlets, a reduction in the price differentials for gasoline as between the majors and the independents, the closure of many gas stations, and increased cross-merchandising of gasoline with other products and services. The joint marketing of gasoline and automobile repair services has greatly declined.

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[4] "Major" is sometimes used in the Report to refer to all refiner/marketers in order to distinguish them from unintegrated marketers or independents. On occasion the term major is used to refer to the national majors and the remaining refiner/marketers are referred to as "regional refiners".

[5] The term "independent" is used in this Report to refer to an unintegrated marketer selling under his own brand.

The refiner/marketers and the independents have experimented with various marketing techniques. In the 1950s and 1960s the typical gasoline station owned by a refiner/marketer was a relatively low volume outlet with pump-island service plus maintenance and repair facilities. Independents began to enter the market in a significant way in the 1950s. Most did so on the strength of prices lower than those available from the refiner-branded outlets. Their approaches varied from "no frills" gas bars to the large scale cross-merchandising of gasoline with automobile repairs and the sale of automobile parts as in the case of Canadian Tire. Refiners responded by introducing various offerings including car washes, large diagnostic and repair facilities and second brands.

Later, in the mid-1970s, the refiners expanded the number of self-serve outlets. By 1980-1981, the proportion of major refiners' outlets that were self-serve varied between 10 and 26 per cent, accounting for 30 to 47 per cent of the total major brand retail sales.

Refiners also increased the extent of their influence in retail markets through consignment, other dealer support programs[6] and agency arrangements. The increased direct participation of refiners in retail marketing has been of concern to both the refiners' dealers and to independent marketers. So-called "dual distribution" by refiners, whereby they are both suppliers to and competitors of dealers and independents, has raised a number of issues in the inquiry. These include the terms under which the refiners make supplies available to various classes of customers, and the degree of control exercised by refiners over their customer/competitors through the use of measures such as consignment selling and support programs. In addition to vertical integration through refiners owning gas stations, various forms of quasi-vertical integration are created through certain types of refiners' supply relationships with other customers.

Households and industrial and commercial users of heating oil are another important market for petroleum companies. Unlike gasoline, for which substitutes of propane or natural gas are only economically feasible for large volume users, heating oil faces substantial competition from natural gas, electricity and other energy sources. In Western Canada natural gas is used almost exclusively in place of heating oil, and so the observed market trends arise largely from changes which have taken place in Eastern Canada. For example, the sales of light fuel oils in Eastern Canada declined from 105.4 M barrels in 1970 to 47.8 M barrels in 1984, a drop of 55 per cent. During the same period, the proportion of Canadian homes heated by oil declined from 58 per cent to 25 per cent, while that of natural gas rose from 33 per cent to 44 per cent and that of electricity, from 4 per cent to 25 per cent. These changes have been due to a combination of changes in relative prices and government policies encouraging conservation and substitution away from fuel oils.

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[6] "Support" refers to changes in "normal" wholesale prices that provide branded dealers, and occasionally independents, with a minimum margin.

The shrinking market for heating oils in Eastern Canada has been accompanied by a decline in the number of heating oil distributors. For example, in Quebec, between 1977 and 1982, 422 local private brand distributors were either closed or acquired. The market share of independent heating oil distributors in Quebec has declined from over 40 per cent in 1978 to around 20 per cent in 1984, while in Ontario the drop has been somewhat smaller. Thus, the declining heating oil market has been associated with a larger market share of a diminishing market for major brand or refiner distributors.

4. International Dimensions

The petroleum industry is a multi- or supranational industry. It represents a high proportion of international trade and investment. The actions of foreign governments can have, and indeed have had, considerable impact on producers and consumers in Canada and in other countries. Over time, firms in the upstream and downstream sectors in Canada, as well as governments, have had to adjust to pressures emanating from outside the country. Canada can only isolate itself from these pressures if it is willing to adopt buffering policies which in turn will affect prices.

In 1983-1984, Canada had about one per cent of estimated world proved crude oil reserves, and about 2.5 per cent of world crude oil production, refining capacity and oil consumption. In 1983 Canada became a net exporter of crude oil for the first time since 1974, with net exports accounting for 2.8 per cent of crude oil production. In refined petroleum products Canada has been a net exporter since 1974, at about 48,000 barrels per day (b/d) in 1984. Although the volume of Canada's trade in both crude oil and refined products is small relative to world totals, both have been important to the industry in Canada. Crude oil imports have been a major source of supply for refineries in Eastern Canada, while exports to the U.S. have generated earnings for crude oil producers in Western Canada. The United States has also been the destination for product exports, and the loss of markets in the Northeastern U.S. in the 1970s was largely responsible for two refinery closures in Eastern Canada. At different times, American energy policies have encouraged and discouraged petroleum industry developments in Canada.

International investment, in addition to trade, links the Canadian industry to outside influences. Foreign investment occurs in both the upstream and downstream segments, and is high in refining where in 1985 about 60 per cent of capacity was owned by six foreign-controlled firms, with almost half of a seventh, Irving Oil Ltd., being owned by Chevron Corporation. Canadian Government-owned Petro-Canada is now the second largest refiner with 23 per cent of Canadian refining capacity. Its entry and acquisitions since 1979 have sharply reduced the level of foreign ownership in the Canadian refining industry.

Foreign ownership has been associated with pricing questions where firms in Canada make purchases from affiliates abroad. Transfer prices pose a problem for tax authorities and can have implications for the competitive positions of Canadian firms. However the availability of imported crude oil and refined products can provide strong disciplining pressures on Canadian markets provided that there are no tariff or non-tariff barriers to imports, and no other barriers growing out of the structure of the industry.

5. Government Policies

The environment of the industry has been shaped in large measure by government policies. Government regulations apply to crude oil production, pipelines and in some areas marketing, and many government initiatives have involved a trade-off against the forces of competition. For example, at times crude oil imports have been restricted to provinces east of Ontario, and at other times lower compensation has been paid on imported refined products than on crude oil. Policies to achieve greater domestic security of oil supply, greater use of Canadian oil or the protection of Canadian jobs often mean subsidizing and protecting domestic firms at the expense of competition.

The evolution of Canadian government policies can be traced over time. Prior to the Leduc oil discovery in 1947, there was little reason for governments to become involved in the Canadian petroleum industry other than to provide incentives for exploration. Following significant crude oil discoveries in Alberta, the Provincial Government imposed prorationing controls to regulate drilling and production in order to prevent inefficient production and a waste of resources and to allocate limited sales among producers.

The industry changed as domestic crude oil production began to account for an increasing share of Canadian requirements. The problem then for policy makers was to balance the interests of Canadian crude oil producers with those of consumers who could be supplied either through imports, which at times were cheaper, or from domestic production.

During the 1950s, increasing supplies of cheap crude oil from the Middle East led to protective measures for North American producers. The United States imposed voluntary (1955) and then mandatory (1959) crude oil import quotas in the name of national security. A U.S. Cabinet task force stated that crude oil imports should be limited to maintain "domestic production needed for projected national defense requirements and the capacity of the U.S. to meet national security requirements".

Canada followed suit with its National Oil Policy (NOP) in 1961 which had the effect of reserving the western Canadian market and most of Ontario for Canadian crude oil, while Quebec and Atlantic refineries were allowed to import their requirements. The NOP also served to maintain access for Canadian crude oil to the U.S. in that voluntary export quotas to U.S. markets were set by the two governments. However, in practice, Canadian export sales greatly increased and usually well surpassed the voluntary limits established for Canadian sales, especially to the U.S. midwestern market.

After 1973, the international market for crude oil sharply changed, and the measures taken by OPEC raised the international price of crude oil. Canadian crude oil prices fell below world prices and, instead of needing protection, producers could raise prices and still compete strongly through most of Canada and the Northern U.S. markets. However, after 1973 the Federal Government shielded Canadian consumers from the impact of rising crude oil prices by a combination of three measures: controlling the price of crude oil sold in Canada; paying compensation to Eastern Canadian refiners who still relied on imported, now high cost, crude oil; and placing an export tax on crude oil exported from Western Canada to the U.S. so that Canada, as a producer and exporter of crude oil, would benefit from the higher international prices.

In 1976, Petro-Canada was established as a state-owned enterprise to provide government with a window on the industry, and to increase the presence of Canadian-owned firms in the industry. A further layer of policies was added in 1980 with the introduction of the National Energy Program (NEP) the nature of which is outlined in the following chronology.

Chronology of Main Federal Petroleum Industry Policies in Canada

1957 (Borden) Royal Commission on Energy established.

1959 Report of the Royal Commission on Energy published.

National Energy Board (NEB) established under the National Energy Board Act with power to license pipelines crossing provincial borders, as well as petroleum imports and exports.

1961 National Oil Policy (NOP) introduced; area west of the Ottawa Valley reserved for Canadian crude oil.

1970 Mandatory controls on gasoline imports introduced, lasting until October 1973.

1973 NOP terminated. Government announces 60 day freeze on the price of Canadian produced crude oil. Government controls on the price of crude oil at the wellhead and on the prices of petroleum products begins and extends to June, 1985.

Oil Export Tax Act passed, introducing a crude oil export tax to equate the price of Canadian crude oil exports with that of other foreign crude oil sold to the U.S.

1974 Oil Import Compensation Program introduced in order to subsidize cost of imported crude oil and products.

1975 Petroleum Administration Act, an umbrella regulatory act, (subsequently called the Energy Administration Act) introduced.

1980 National Energy Program (NEP) introduced with three objectives; 1) security of supply through independence from the international market; 2) increased Canadianization of the industry through domestic ownership, and 3) fairness in the determination of prices and allocation of revenues.

NEP policies included:

1. A federally imposed schedule providing for a gradual increase in the domestic price of oil towards the international price.

2. The Petroleum & Gas Revenue Tax.
3. The Petroleum Compensation Charge.
4. The Canadian Ownership Special Charge.
5. Incentives to encourage consumers to substitute away from oil and to conserve energy.
6. Direct subsidies for exploration and development activity, the Petroleum Incentive Payment, to replace depletion and super-depletion allowances. Preferential treatment is given to firms based on their degree of Canadian ownership, and to exploration offshore and in the Territories (Canadian lands).
7. Provision for Petro-Canada to purchase one or more large subsidiaries of foreign petroleum companies with assistance from the Canadian Ownership Special Charge.
8. Reservation for the Crown of a 25 per cent interest in development on Crown lands, including discoveries prior to 1980 (the back-in provision).

1981 Agreement reached between the Federal and Alberta Governments for a schedule of oil price increases.

1985 The Atlantic Accord between the Federal Government and the Government of Newfoundland creates an equal partnership in the development of offshore resources.

The Western Accord between the Federal Government and those of the three Western provinces to remove crude oil price controls, to allow the price to follow world prices from June 1st, 1985, and to allow the immediate or phased removal of various energy taxes and levies, effectively abolishing the NEP.

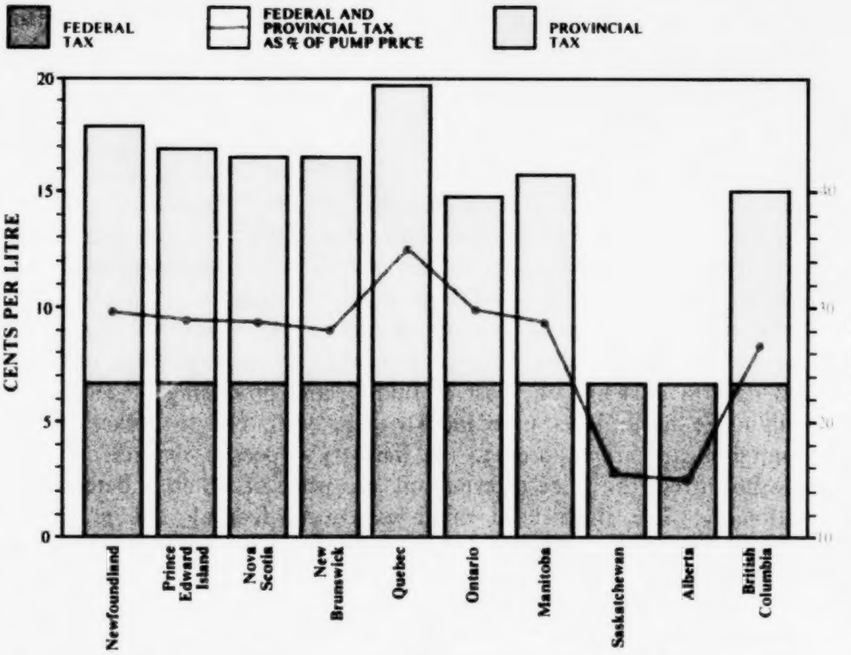
In 1985, deregulation of domestic crude oil prices and related aspects of the industry occurred with the Atlantic and Western Accords between the federal and certain provincial governments, limiting the pervasiveness of formal government intervention.

A chronological listing of major policy developments is of more than historical interest. The web of policies reveal the conditions within which competition in the industry has had to operate. The domestic and international pressures which gave rise to many of these policies are still present, although in different forms. In recent years surplus refining capacity around the world has intensified competition in international product markets thereby making the option of importing products into Canada more attractive.

Energy taxation is a field of government policy which is almost an industry in itself. Governments have found oil to be a lucrative source of revenue and have not lacked in imagination in devising revenue raising measures. The effects of taxation are difficult to disentangle and not surprisingly are poorly understood by the public. No attempt is made in this Report to sort out these effects beyond recognizing their existence and the difficulties of interpretation which arise. It is difficult to sort out the effect of taxes on product prices. The taxes paid by petroleum companies fall into three broad categories. First, there are corporate profit taxes and local taxes, to which firms in all industries are subject. These will affect oil prices, but in principle no more and no less than those in other industries. A second group of taxes is related to attempts by governments to take advantage of the fact that there has been a positive difference between the market value of crude oil (and natural gas) and the cost of finding and producing it. Taxes are levied in other natural resource industries as well, but the taxes in the petroleum industry are tailored to the industry's specific character. These taxes do not affect the price of crude oil, the price of which is determined internationally. The third level of taxes covers federal and provincial consumption taxes. All, or almost all of the total amount of these taxes would be reflected in prices paid by consumers.

Gasoline, diesel, aviation fuel, and propane when used as a motive fuel, are taxed by the Federal Government and by most provincial governments. In October 1985, the Federal Sales and Excise Taxes on regular leaded gasoline amounted to 6.8 ¢/*l*, while the provincial taxes varied by province, from zero in Alberta and Saskatchewan to 12.9 ¢/*l* in Quebec. (That portion of the provincial road taxes which replaces general provincial sales taxes, and the federal sales tax, are not of course, unique to petroleum products.) The result is that the above federal taxes plus provincial consumption taxes as a percentage of the pump price of regular unleaded gasoline varied from about 15 per cent in Alberta and Saskatchewan to over 34 per cent in Quebec — Figure 4.

FIGURE II-4.
Consumption Taxes on Regular Leaded Gasoline By Province, October 1985



Source: Energy, Mines and Resources, *Petroleum Utilization Highlights*, Oct. and Nov. 1985.

III

A Summary of Concerns and Views

1. General Public Concerns

Before summarizing the various concerns and views expressed directly to the Commission in evidence or formal submissions, it may be helpful to note the nature of the principal recurring concerns of the general public as they appear to the Commissioners from their review of general media coverage of the industry.

The most frequently expressed general public concerns and apprehensions relate primarily to retail gasoline prices and may be summarized as follows:

1. The absolute level of prices is too high. (This concern is increasingly expressed in conjunction with a comparison of Canadian retail gasoline prices with those in the United States or with the price of crude oil on world markets.)
2. Pump prices are nearly identical for comparable grades of gasoline at stations that are adjacent or neighboring, and leave little room for consumer choice.
3. In those areas of the country where pump prices fluctuate, they tend to edge downward over a period of weeks but then suddenly increase very significantly within a matter of hours at all outlets, and sometimes just prior to peak demand periods such as holiday weekends.
4. Significant differences in pump prices exist from time to time between neighboring communities, and some areas experience greater ongoing volatility of pump prices than do others.

For want of a better explanation of the probable cause of these various phenomena, it is not surprising if members of the public adopt the occasional speculations of reporters, politicians or others to the effect that price fixing or other illegal, cooperative or manipulative action is the probable cause, or for concluding that in any event all cannot be well in the functioning of the gasoline market. Persons who read this report will realize, however, that there can be other explanations for the above phenomena. It may further be noted that the Director has at no time alleged that the voluminous evidence tendered by him or by others to the Commission shows that a criminal offence has been committed by anyone.

2. Consumers' Associations

The Commission received submissions from the national office of the Consumers' Association of Canada ("CAC") and, in addition, from the CAC branch offices in each of British Columbia, Alberta, Saskatchewan, Manitoba, Nova Scotia and Toronto. Several of the submissions were supported by surveys of consumer experiences and views.

The basic concern of the consumers' associations is that there is insufficient price competition and too few alternative offerings in the retailing of gasoline in Canada. They are of the view that the insufficiency of competitive rivalry results from too high a degree of concentration and too much vertical integration, both of which have resulted in too much market power for the major oil companies at the retail level. They are concerned that the majors have the power to exclude or constrain independents by means of lower priced supply to retail outlets (particularly self-serve) that are owned and operated by the majors themselves. They are also concerned that government regulation in certain provinces and municipalities which restricts entry and the range of retail offerings (e.g. by restrictions on self-serves, gas bars and extended hours of business) exacerbates this condition. Overall, the consumers' associations are of the view that there are too few distinct enterprises engaged in the retailing of gasoline, too many stations resulting in too low average volumes and too high unit costs, and, in some markets, insufficient alternative offerings.

Perhaps because of the system of provincial regulation in Nova Scotia, the Nova Scotia branch of the CAC was particularly strenuous in urging the elimination of regulatory restrictions on the number and types of retail offerings. Further, it felt that dealer margins should not be propped up by regulation because inefficient stations were thereby preserved.

In general, the consumers' associations were concerned that the effect of provincial and municipal government regulation was to diminish retail competition to the detriment of the consuming public.

The consumers' associations also strongly recommended that retail gasoline outlets be required to post the pump prices of all grades of gasoline sold at the outlet, and in a manner that the prices are clearly visible from the street. They felt that this was important to the making of informed consumer choices. (The practice of posting pump prices became common in the industry shortly after the regional hearings where these submissions were made.)

The Saskatchewan branch of the CAC proposed to the Commission that discounts for cash should be required to be given by gasoline outlets that also accept credit cards.

3. The Director of Investigation and Research

As with the other summaries in this chapter, the summary below attempts to capture the essence of the Director's views without reciting the detail on which those views were based.

The Director's assessment of facts and of the state of competition in the Canadian petroleum industry differed somewhat at the conclusion of the Commission's hearings from the views he had expressed in his Green Book. His recommended remedies also changed. Although the broad thrust of the Director's views remained largely unaltered over the course of the Commission's hearings, it may nevertheless be helpful to note the principal respects in which his views as expressed in the Green Book in 1981 were subsequently modified.

(a) Sourcing of Crude Oil

For reasons of availability and price, refineries in Eastern Canada have historically obtained most of their crude oil from abroad rather than from Western Canada or the United States. In the Green Book, which focused primarily on the period 1958-1973, the Director concluded from his private investigation that the eastern Canadian refiners, who imported crude oil almost exclusively from their international affiliates (who in turn, as multinational oil companies, produced the crude oil from their Venezuelan, Middle East or other concessions) paid "artificially high prices" for the crude oil. In the Director's view these artificially high prices were made possible by control by the multinational oil companies over crude oil exports to Canada, by a measure of "harmonization" of price levels as between the majors, and by their retail market power in Quebec and the Maritime provinces. The latter, in the Director's submission, permitted a pass-on of the "unrealistic" crude oil import prices in the form of higher product prices and thereby diminished downward competitive pressures on upstream costs.

As for the supply of domestic crude oil from Western Canada, the Director was critical of both the integrated oil companies and governments.

First, he was of the view that the production restrictions inherent in the prorationing scheme implemented by the Energy Resources Conservation Board of Alberta created an environment in which the industry could elevate crude oil prices. Second, he observed that the National Oil Policy, which limited competition west of the Ottawa Valley from imported crude oil sources during the period 1961 to 1973, helped insulate that part of the country from offshore competition at a time when international prices were sagging. Third, he believed that domestic crude oil producers took advantage of this reduced competition to keep domestic crude oil prices higher than they would otherwise have been. Finally the Director asserted in his Green Book that integrated oil companies, which dominated the ownership and the operation of the major pipelines, exercised that power in a manner that suppressed price competition among domestic producers of crude oil, and that also distorted competition among the refiners to whom the crude oil was transported.

The Green Book was not entirely clear as to whether the Director's general factual assessments outlined above were limited to the pre-1973 period or were meant to apply through to 1981. International supply conditions changed dramatically in the 1970s, notably as of 1973, leading to the discontinuance of the NOP and to the establishment of import compensation. In any event, it became clear during the Commission's hearings that insofar as the upstream sectors of the industry were concerned, and unless expressly stated otherwise, the Director only regarded his Green Book as speaking to the period up to 1973. At the conclusion of the Commission's hearings, the Director abandoned the remedial proposals relating to the domestic production and pipeline sectors which he had made in his Green Book. As for the prices paid for imported crude oil after 1973, he concluded, based on the evidence tendered during the Commission's hearings, that the prices had been "higher than necessary", due in part to the design and operation of the federal government's import compensation scheme, and in part to the failure of Canadian refiners to take advantage of the availability of foreign crude oils at prices lower than those established under their supply contracts with their international affiliates. The Director proposed remedies in his final argument with a view to changing the design of aspects of the import compensation program and to providing firmer guidelines for the determination of "fair market value" under the Income Tax Act as it applies to crude oil imports.

Because of the Government's decision in 1985 to allow Canadian crude oil prices to be set by market forces, the import compensation program has been discontinued and, therefore, this part of the Director's remedial proposals is no longer applicable.

The proposal regarding the tax guidelines falls within the realm of income tax enforcement, an area in which the Commission has no expertise and which is well outside its mandate. Although the Commission does not intend to make any comment on the proposal, it has been available to the Department of National Revenue for whatever assistance it may be to its officials. Moreover, the Commission does address the importance of strong tax enforcement in its conclusions.

(b) Refining Sector

The Director's position throughout has been that the Canadian refiners, each of whom unavoidably possesses a degree of market power as a result of the small Canadian market and the need for economies of scale in refining, coordinated their market power through and in conjunction with a comprehensive network of interdependent product supply agreements among themselves in order to restrain price competition in the marketing sector. More particularly, in his view, the purposes and effects of these product supply agreements have included the restriction of competition among refiners, restrictions on the supply of refined product to unintegrated resellers, and general coordination of capacity reductions and expansion in order to ensure that supply does not significantly exceed demand.

Although, in the final analysis, distortions of or restraints upon competition may manifest themselves primarily in performance deficiencies at the retail level, the Director was of the view that anticompetitive coordination at the refining level was central to the transmission of competitive deficiencies between sectors in the industry by virtue of the refining sector being the central link in the vertical integration chain. In the Director's words:

> Upstream, in production, the structure of the refining sector contributed to the concentration of crude control in the hands of a small number of companies. Downstream, in marketing, the interdependence that developed between firms at the refinery level enhanced the tendency of these same firms to adopt mutually reinforcing disciplinary policies that restricted competition.

In his Green Book the Director had proposed that refinery supply agreements be subject to approval of the National Energy Board, which would be required to consult with the Minister of Consumer and Corporate Affairs. In his final argument the Director urged instead that reciprocal or interdependent product supply agreements between refiners be essentially prohibited and that all other product supply arrangements be severely restricted in duration unless, following review by the Restrictive Trade Practices Commission, the agreement was found to have a beneficial effect upon competition.

(c) Marketing Sector

The Director's concerns regarding the marketing sector focused almost exclusively on the marketing of motor fuels, notably gasoline. Although he addressed heating oil peripherally, and some of his remedial recommendations in the Green Book related to heating oil as well as to gasoline, the Director's recommendations at the end of the Commission's hearings were directed solely to the marketing of motor fuels.

The overall allegation in the Green Book was that not only did the majors avoid significant price competition among themselves, but that since the 1950s, acting as a coordinated unit, they had engaged with considerable success in exclusionary conduct to delay, inhibit or prevent price competition and organizational change in the marketing of gasoline.

According to the Green Book, the "regional majors" at the time (Irving Oil, Petrofina, Supertest, British Petroleum, Sunoco and Standard Oil of British Columbia) followed and reinforced the practices of Imperial Oil, Gulf, Shell and Texaco (the national majors) by not competing in price among themselves. The Director attributed this in large part to a "mutual forbearance" among these companies that resulted in part from "linkages" at the production and refinery levels. Instead, in the Director's view, the integrated petroleum companies competed for volume by means of location and number of outlets, quality and extent of service, brand advertising, credit card facilities and promotions. In the Director's view this was very expensive competition, resulting in many low volume and high unit cost outlets, and led to high wholesale and retail margins.

These high margins in turn attracted no-frill, low price, unintegrated retailers including mass merchandisers, automotive supply companies and "unbranded discounters" to the potentially high volume urban markets. The Director's analysis of the facts available to him led him to conclude that rather than seeking to compete with the independents on the basis of performance, in terms of offering lower prices instead of the frills, the majors responded with exclusionary tactics with the purpose and effect of inhibiting entry and expansion of the independents, and of eliminating some of the lower priced competitors. The Director concluded that the majors sought to and did raise the entry barriers, protected their investment in their branded networks, and thereby entrenched and extended "the monopolistic position that they owed to their control upstream in refining and at the crude acquisition stage", by seeking to prevent or lessen competition on the basis of price at the retail level.

The Director's view as expressed in the Green Book was that the exclusionary or disciplinary tactics adopted by the majors varied within the time frame covered by this Inquiry. In the initial period of significant independent activity, 1959 to 1964, the majors were able to implement low prices at their own outlets by putting their dealers on consignment or by granting special allowances to dealers who set low pump prices. In the next period of significant independent activity, 1969 to 1973, the majors continued to use the first two tactics but also adopted second or "fighting" brands for stations owned and operated by themselves, by means of which they would target the independents with low prices.

The Director asserted that as international supply conditions changed in the late 1960s and the 1970s, and control by the multinational oil companies over international crude oil supply began to diminish, the interests of the national majors became directed to a greater degree than in the past at the elimination of the independents. In part, in his view, this was accomplished by buying out and merging with certain independents, limiting gasoline supplies to independents, and by squeezing the margins of independents by either increasing the wholesale price to them or by lowering prices at their own retail outlets so as to reduce the prevailing retail price.

The Director's assessment of the current problems in the retail sector of the market, and of the required remedies, changed during the Commission's hearings. His changed view is reflected in the following statement from his final argument. After referring to the types of practices alluded to in the Green Book, as described above, he stated:

> In the Director's submission, these practices all served to restrain the independent marketer. It should be added that many of these practices continue today.
>
> The competitive issues today, however, are different from those prior to 1973. The integrated companies are no longer attempting to control the reseller, that day has past. The present concern is that the integrated companies have embarked upon an ambitious program to control the price at which gasoline is sold throughout the economy.

The Director's principal concern in this regard related to evidence that over the last few years the integrated companies have acquired pump pricing control over a larger and larger proportion of total retail motor fuels sales by means of company owned and operated service stations (largely self-serve), the sale of gasoline in some cases on an agency basis through outlets owned by others, and by means of extensive temporary allowances and dealer support programs which, in the Director's view, have a price supporting effect.

The remedies proposed by the Director in his final argument pertaining to the marketing sector are examined in detail in this report. His principal recommendations were that no retailer be tied exclusively to any one supply source in its purchase of motor fuels, that suppliers of motors fuels be prohibited from obtaining direct or indirect control over pump prices at any marketing outlets other than those owned and operated directly by the supplier, and that any acquisitions by refiners of retail motor fuel outlets be subject to prior approval by a government agency.

4. Independents

The term "independent" is ambiguous but tends to be used in this industry to refer to a marketer of gasoline or heating oil who retails under his own brand but who does not own a refinery. The term is used in that sense in this Report, although the Commission recognizes that other marketers also enjoy varying degrees of independence from their suppliers.

As so defined the group includes large retailers such as Canadian Tire and Mohawk Oil, and retail chains that sell gasoline as agents for refiners. The group also consists in important part, of a number of smaller businesses that operate one or only a few gasoline outlets. These smaller businesses tend to be financially more precarious than the others and have a unique set of concerns regarding the functioning of the market.

Although some independents occasionally have crude oil processed for them under contract with a refiner, and import products and operate storage terminals and transportation facilities, in essence their business consists of purchasing supplies from one or more refiners for resale under their own brands. Independents in gasoline retailing, many of whom also sell diesel fuel, home heating oil and industrial fuel oil at wholesale and retail, are sometimes referred to as "unbranded" or "private brand" which, although perhaps confusing to someone outside the industry, means only that they do not conduct business under a "major brand" as a "branded" dealer.

The Commission heard testimony from several members of this group from virtually every province. In addition, the interests of many independents were represented during most of the Commission's hearings by a representative of the Canadian Federation of Independent Petroleum Marketers[1] (the "Federation").

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[1] Despite repeated requests and undertakings to do so, the Federation did not advise the Commission of its list of members. It is known, however, that the Federation did not represent or speak for the larger chains of unintegrated resellers such as Canadian Tire and Mohawk.

The largest independents such as Mohawk Oil and Canadian Tire did not express concerns about the operation of the market.

The only domestic supply options for almost all independents are, directly or indirectly, their integrated competitors, and their main concern has to do with the terms upon which they obtain supply. To a lesser extent, they are concerned about access to product, including equitable access in times of overall shortage. They also complained that aspects of certain government programs, notably the import compensation regulations, the Domestic Transfer Compensation Program, federal sales tax and Ontario's fuel oil coloration requirements, prejudiced many independents. After examining the latter three complaints in some detail, the Commission concluded that they did not raise general competition policy issues.

As to the main concern regarding terms of supply from Canadian refiners, most of the representations related to the power of the majors to shrink the operating margins of the independents virtually at will, either by competing in a way that drives the prevailing pump price down or by raising the wholesale price. Smaller independents prefer to preserve their short-term flexibility to seek out the lowest cost supply options and often do not have supply contracts. Even when they do, their short-term (typically one year) contracts with specified minimum and maximum quantities, often contain no price guarantees. Independents told the Commission that if an independent does not wish to pay a price increase that is demanded, his only option is to seek another source of supply. Also, when the relationship between wholesale and pump prices is such that most branded dealers are on support, support payments or discounts to the independent are discretionary as to whether they are given, at all and as to their amount, and if they are given, it is frequently after the fact. Many independents claim that overall, the environment is such that they are inhibited from taking price initiatives. At the same time they believe that their costs of operation are lower than those of the major brands due to lower administrative and brand promotion overheads and to typically lower cost stations. They are of the view that they should be able to reflect these lower costs in relatively lower pump prices. A lower pump price is virtually the only basis available to them for attracting gasoline customers, and they feel unable to establish what they feel is an acceptable major brand/independent pump price differential in the market.

Some independents also complained that the majors' prices to commercial/industrial customers were such as to virtually exclude independents from that segment of the market.

As to how these concerns might be alleviated, the Federation urged a strengthened competition law. In particular, it strongly recommended amendments to the Combines Investigation Act such as those contained in recent Government proposals. The Federation also strongly recommended a greater informal quasi-regulatory role for the Director, which it termed one of "moral suasion" or "mediation". This latter related to the concern of the independents that there be quick and effective remedies for misuses of market power which could most satisfactorily be achieved under informal, non-adversarial arrangements.

The Federation submitted that there should be no other form of government intervention in the petroleum products market place, although it did recommend that further private sector "Canadianization" of the downstream segment be encouraged. As for the continued role of Petro-Canada, the Federation submitted that "Petro-Canada should . . . behave within the industry under the same terms and conditions of the marketplace as comparable competitors in that it is profit-motivated and that the marketing activities of Petro-Canada should be judged as a separate operation and be reported on a segmented basis. Petro-Canada should set the example and lead other refiners in not treating its own marketing system with any preference relative to how independents are treated who compete in that same market."

The Federation recommended that the Commission reject the Director's proposals that exclusive dealing in motor fuels be prohibited, except where the supplier's price was not "reasonably competitive". It did not consider that it was necessary to require advance government approval of acquisitions of retail motor fuel outlets except under the foreign investment review controls. Further, it considered that implementation of the Director's recommendations that non-petroleum use covenants be prohibited, and that marketers be permitted to identify the manufacturer of the motor fuels they were selling, might well do more harm than good.

5. National Automotive Trades Association

The National Automotive Trades Association of Canada ("NATA") is a federation of eleven provincial associations, the membership of which in turn consists of approximately 6,000 gasoline retailers in addition to a number of new and used car dealers, auto body shops, towing companies, automatic transmission rebuilders and the like.

The typical gasoline retailer represented by NATA is a full service dealer who owns or leases his premises and who, in addition to purchasing gasoline from his franchisor/ supplier for resale under a major's brand, also operates one or more service bays. Many such service station operators testified before the Commission. In addition, NATA made an opening submission at the start of the Commission's hearings and submitted lengthy argument at the conclusion of the hearings.

NATA and the gasoline retailers it represents, have one main complaint about the way gasoline is marketed in Canada: they feel that they are competitively prejudiced by being required to purchase gasoline at the dealer tank wagon price[2], an "artificially high wholesale price" and not "a realistic or true wholesale price". NATA told the Commission that its members compete against self-serve and second brand outlets, which are owned and operated by their suppliers, and against "private brand" independent resellers, none of whom pays the dealer tank wagon price and all of whom, for one reason or another, pay a lower transfer or wholesale price.

The branded dealers also had other complaints relating to what in their view, was excessive market control by the vertically integrated oil companies over the retail sector, and in particular, over retail pricing. NATA is of the view that downstream vertical integration developed largely as a result of attempts by the majors to "stabilize" the industry in the face of problems that occurred from time to time, and that it "necessarily had anti-competitive results". As expressed in NATA's final argument:

> The situation today is that there is no meaningful wholesale price and no meaningful independent business status for either branded dealers, lessee dealers or independent resellers. The independent resellers face the same control mechanisms as do the branded dealers; contracts are arbitrarily terminated, price support is given at whim. Virtually, only the larger independent resellers with numerous outlets remain viable. The exception to this statement proves the rule — they are the outlets with guaranteed margins whose proprietors' only role is to glean benefit from ownership of the real estate, with no involvement in the marketing of the gasoline.

NATA made several recommendations to the Commission to deal with the problems as it perceived them and to help achieve "pricing fairness and stability at the retail level". First, it recommended that "functional divorcement" be imposed upon the industry whereby a refiner, although it would be permitted to own retail gasoline outlets, would be prohibited from operating or controlling any outlet to which it supplied product, either directly or indirectly or pursuant to an agency or management contract. In conjunction with proposing functional divorcement NATA further proposed that a branded dealer have a right of first refusal to purchase "his" service station property should it be offered for sale by his supplier.

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[2] The dealer tankwagon price (DTW) is the delivered wholesale price to major brand dealers.

Second, NATA proposed that "refinery gate pricing" be imposed upon refiners. It would require each refiner to charge the same posted price to all customers on the same day for each product and service, regardless of volume or class of trade. No other wholesale, tank wagon or transfer prices would exist. The "refinery gate prices" would apply to customer pickup at the supplier's refinery or bulk terminal facility. Additional products or services, including promotions and delivery costs, would be priced and paid for separately.

As a possible alternative to uniform refinery gate pricing NATA had urged in its opening submission to the Commission that the prohibition of price discrimination as contained in section 34(1)(a) of the Combines Investigation Act be strengthened to make clear that the wholesale supply of "branded" and "unbranded" gasoline would be treated as being the supply of products of "like quality" within the meaning of section 34(1)(a), thereby requiring that the same price be charged to competing retailers where the volumes purchased were the same. Consignment sales would also be prohibited.

NATA further proposed the enactment of a "Dealer Bill of Rights" which, unlike the voluntary service station lease guidelines that currently exist in Alberta, B.C. and Ontario, would provide legally enforceable protection against unilateral lease termination, non-renewal, site conversion and rent increases. The issues raised in this proposal lie, in the Commission's view, outside the scope of its mandate.

6. The Association des Distributeurs d'Essence du Québec

The Association des Distributeurs d'Essence du Québec (ADEQ), an association of some Quebec gasoline lessee-retailers, made a general submission to the Commission. ADEQ is of the view that the profits of its members are unfairly prejudiced by the direct operation of self-serves by refiners; by their members having to pay for gasoline at the time that it is delivered to them instead of when they resell it, with the result that they must finance the gasoline in the in-ground, storage tanks and must pay for gasoline that evaporates prior to the time of retail sale; by the insecurity of tenure when stations are leased from petroleum companies; by their members having to pay for equipment maintenance; by their members having to pay credit card charges; by having different prices and business hours imposed upon different stations by petroleum company lessors; and by their members paying rents that are too high, particularly for low volume stations. Further, ADEQ is of the view that its members should be empowered to negotiate assured retail margins with their suppliers and to limit the entry of new gasoline retailers into their markets.

ADEQ proposed a series of remedies that in its view would meet the concerns of its members. It recommended to the Commission that refiners be prevented from selling at the retail level; that service station owners be required to pay for the gasoline supplied to them only as and when it is resold by them; that credit charges be prohibited; that service station equipment maintenance be paid for by petroleum company lessors; that lessees selling less than 300,000 gallons per year not be required to pay rent and that above that volume level, rent be limited by a formula related to profits; that greater assurances against lease cancellation and nonrenewal be provided; that uniform prices be charged by refiners to all retailers; that retailers be permitted to determine their own business hours; and that retailers be given control over the licensing of additional retailers in their markets.

The proposals relating to business terms between lessors and lessees deal with similar subject matter as NATA's proposed "Dealer Bill of Rights" and similarly lie outside the scope of the Commission's mandate. Here as elsewhere it should be clear that the fact that a matter is outside the Commission's terms of reference in no way reflects a Commission view of the merits of complaints or proposals.

Some of the other proposals in ADEQ's submission could have general competitive effects and are subsequently addressed.

7. Views of Governments

Although the Commission specifically invited submissions from all provincial governments and from such federal government agencies believed to have a special interest, only the then Government of Saskatchewan, as a government, made a submission. The submission was made orally and in writing by Saskatchewan's Minister of Consumer and Commercial Affairs in early 1982.

Although the Government of Saskatchewan questioned the current relevance of the Director's concerns regarding crude oil pricing in the period 1958-1973, it was generally supportive of the remedial recommendations made by the Director in his Green Book provided that the Commission found, after hearing all the evidence, that the Director's factual conclusions and analyses were warranted. The Government of Saskatchewan expressed no view as to whether or not those conclusions or analyses were warranted.

The Government of Saskatchewan invited the Commission to examine two general subjects about which the Government had some concern. First, it was concerned about the effects of unequal bargaining power between the refiners and the gasoline retailers they supplied, and in particular expressed the view that there should be no discrimination as among retail outlets operated by the refiner, those operated by lessees and those operated by independent or other resellers. The second general concern related to cost and price differences in gasoline as among different communities.

The Government of Saskatchewan also expressed support for the general strengthening of Canada's competition laws and, in particular, for proposals to decriminalize the competition laws so that remedial action could be taken without having to meet the exacting standard of proof required under criminal law.

8. Responses of the Integrated Oil Companies

The integrated oil companies responded primarily to the allegations, arguments and recommendations that were made by the Director, although they also responded to certain recommendations made by others.

The initial response by the major integrated oil companies to the Green Book was made in their opening statements at the commencement of the Commission's hearings. Each of them flatly denied both the historical and current validity of the Director's criticisms. They criticized the quality of his analysis and expressed outrage at the accusatory tone of the Green Book and the manner in which the Green Book had been released and publicized.

Each of the major integrated oil companies presented comprehensive evidence in each phase of the hearings through written submissions and panels of witnesses consisting of experienced officers. Each company's evidence, which was presented after that of the Director in each phase, outlined the history and nature of the company's involvement in the relevant sector and addressed the Director's assertions as they understood them to be at the time of giving evidence.

At the conclusion of the hearings, and after having reviewed the Director's lengthy concluding argument and recommendations, each of the integrated oil companies presented lengthy written argument. The Director had an opportunity to reply and did so.

In general, the oil companies claimed that the Director's analysis was superficial and was virtually totally lacking in objectivity. They criticized many of the Director's submissions as being based on a fundamental misunderstanding of the evidence, sometimes on a deliberate misuse of the evidence, and sometimes as having no basis at all. Each of them emphatically denied being party to any concerted conduct in any sector of the industry at any time.

With respect to the international sector, the majors submitted that such reliable evidence as existed showed that they paid "fair market value", or no higher than a reasonable range of third-party prices, for their crude oil, and that in particular there was no evidence of an overcharge because there was no evidence of their having paid prices that were generally higher than third-party prices in comparable transactions. They submitted that the Director's assertion that they had paid artificially high prices to their affiliates for crude oil, resulted from speculative and theoretical calculations based upon faulty assumptions and unjustified inferences from the evidence. Further, they claimed that they obtained a degree of security of supply and flexibility through their long term contracts with their affiliates that they could not have achieved by relying predominantly upon spot market purchases.

Ultramar Canada Inc. submitted that the Director's concerns about international transfer prices were no longer relevant because "world markets are no longer dominated by a few international majors with common interests".

As for the Director's views regarding product supply arrangements between refiners, the oil companies submitted that longer term arrangements reflected the size of their marketing operations and the large scale of refinery investment. In their view the Director did not appreciate either the nature of the need for security of supply to a large marketing organization or the fact that the arrangements facilitate efficient utilization of refining capacity and thereby reduce costs. They submitted that reciprocal or interdependent product supply arrangements provide additional security of ongoing supply and thereby also facilitate the efficient utilization of refining capacity. Further, they denied that reciprocal or other supply agreements between refiners interfere or have interfered in any way with making product available to unintegrated resellers, and that in fact such agreements enhance competition by enlarging the competing supply options available to such resellers in the regions where the exchange occurs. As for the Director's allegation that unnecessary and anticompetitive exchanges of information occur or have occurred between refiners in conjunction with the negotiation or administration of product supply agreements, the submission of the refiners, in the words of Imperial Oil, was that "it is almost inconceivable, and there is certainly no evidence to suggest, that any company would divulge to a competitor the substance, let alone the detail, of its policies and future plans".

With respect to marketing, the majors submitted that the Director's analysis was simplistic by purporting to measure "efficiency" or optimum performance by volume of sales per station, without reference to the complexity and continually changing characteristics of demand. They submitted that partly as a result of this, but for other reasons as well, the Director confused vigorous competition with abuse of market power and misunderstood the purpose of second brands, which they said were and are intended to cater to "the more price conscious segment of the market". They also submitted that the Director's analysis of price wars and price restorations was unrealistic and that in particular he misunderstood the purpose and effect of dealer support programs, which they said were to assist dealers to survive, at the expense of the refiners, during periods of intense retail price competition. Further, in the view of the majors an analysis of the realization data and other evidence refutes assertions of price discrimination.

Overall, the major integrated oil companies submitted that market shares or concentration were not reliable indicators of market power in gasoline retailing, that significant change had occurred and continues to occur in the industry, that vigorous new competitors enter the industry on a regular basis, and that the unintegrated reseller segment continues to thrive. They submitted that Canada has been and continues to be well served by its petroleum industry and that no changes are required to improve the way the various markets are operating.

The submissions made by the regional major, Ultramar Canada Inc., differed from those of the other integrated oil companies in one important respect relating to the fact that, in its words, "Ultramar shares some of the Director's concerns about the state of competition in the downstream sector of the oil industry". Ultramar was of the view, however, that the Director's remedial proposals relating to the downstream sector would do nothing more than reinforce the status quo. In particular, in Ultramar's view the Director's proposals regarding exchange agreements would prejudice regional refiners more than it would prejudice companies operating refineries in more than one region of Canada, and would further entrench the positions of the national integrated majors. In Ultramar's view "the single most important anti-competitive marketing practice today is concealed marketing by majors through controlled "independents" which involved a "strategy of selling below cost". In Ultramar's view this anti-competitive practice was facilitated by cross-subsidization of downstream losses by upstream profits, and that "the most effective method of dealing with the Director's key concerns would be complete divorcement of marketing and refining from upstream operations". Ultramar recommended this solution.

9. Recent Developments

Following the conclusion of the Commission's main hearings and the submission of comprehensive written argument by all interested persons, certain events transpired that led to further hearings and to the reception of further evidence and argument in 1985 and early 1986. One was the adoption or imminent adoption by some refiners of what appeared to be a fundamentally new type of wholesale pricing practice (referred to as "rack pricing") that would affect some of the more contentious issues in the marketing sector. A second, was Petro-Canada's purchase of Gulf's refining and marketing assets west of Quebec. Third, Ultramar's purchase of Gulf's assets east of Ontario that, together with an aspect of Petro-Canada's earlier purchase, appeared to ensure closure of Gulf's Montreal refinery, raised certain questions regarding the balance of supply and demand for petroleum products in Quebec that the Minister of Consumer and Corporate Affairs asked the Commission to consider in its Report. The Commission has received evidence and argument on each of these three important subjects and addresses them in this Report.

10. A Word About What Follows

Part B of this Report addresses the allegations made by the Director to the effect that Canadians were "overcharged" by Canada's major petroleum companies during the period 1958-1973. Part C addresses more recent developments in the petroleum industry and current competition issues. Part D contains the Conclusions and Recommendations of Commission Members.

Some of the kinds of issues examined in this Report are also addressed in certain respects by Bill C-91, introduced into Parliament in December 1985 to amend the Combines Investigation Act. Where appropriate, the Commission has sought to relate its conclusions and recommendations to the legislative proposals contained in Bill C-91.

B

The Director's Overcharge Allegation

IV

The Allegation of Excessively High Costs and Prices

1. Introduction

One part of the Director's material drew more media attention than the rest. Under headlines including terms such as "rip-off" (a term not used by the Director), the allegation that deficiencies in the performance of the petroleum industry had resulted in excessive prices to consumers was given a high profile. The publicity surrounding this allegation was unfortunate. The allegation related to the period 1958-1973 and had virtually nothing to do with the current policy issues before the Commission and did much to divert public attention away from them. Also, the use of exact numbers created an impression of scientific precision that was not warranted in any event. It may be that without the numerical estimates, the media and prominent political figures would not have treated this part of the Director's material as forming the basis of a burning public issue.

Two broad conclusions underlay the Director's estimates of consumer overcharge: first, that excess costs had been incurred; and second, that they had been passed on to consumers by way of higher prices. It can be argued that some excess costs adversely affect the general public welfare whether or not the costs are passed on, but in any event the thrust of the Director's material was that the costs had been passed on.

The purpose of the overcharge calculation is unclear. It is the first time that such a calculation has been presented to the Commission in any inquiry under the Act. Overcharge calculations are normally carried out in treble-damage suits in the United States, where the plaintiffs attempt to recover damages from the parties to a price-fixing conspiracy or from a single firm where it is alleged that violations of the antitrust laws have damaged the plaintiff. The usual rationale for such suits is that violators of the antitrust laws have enriched themselves at the expense of their customers or other plaintiffs. Although it is the immediate customers who may sue, the alleged costs may ultimately be borne in large part by consumers. The thrust of the

Green Book is apparently similar: "The monopolistic situation prevailing in the petroleum industry between 1958 and 1973 was expensive for Canadian consumers."

This chapter provides an overview of the overcharge allegation and a summary of the Commission's analysis and findings. A detailed discussion of the separate alleged excess costs is contained in Chapters V-VII.

2. A Summary of the Alleged Excess Costs

Four types of alleged excess costs were identified in the Green Book. They are listed in order of magnitude below. The Director estimated the costs incurred between 1958 and 1973 in 1980 dollars.

1. Excess costs due to inefficient gasoline distribution — $5.2B.
2. Artificially high transfer prices for imported crude oil — $3.2B.
3. Excess costs of domestic crude oil used in Ontario during the period when the National Oil Policy (NOP) restricted the use of imported crude oil — $3.1B.
4. Extra costs associated with importing product necessitated by high domestic prices — $0.6B.

3. A Summary of the Commission's Analysis and Findings

It is important to note that the excess costs allegedly incurred by Canada's largest oil companies were of very diverse kinds. They are tied together only by the allegation that they were passed on through the exercise of market power by the oil companies. There is a mix of transfers to private parties and governments, as well as an increase in real resource use. Comparison or addition of these types of costs is not readily accomplished without the common denominator that they all resulted in higher costs to consumers. There is, however, no systematic analysis in the Green Book of whether the alleged higher costs were passed on. There is no more than an assumption that this occurred in the part of the Green Book where the overcharge allegation is set out. This assumption is at variance with those parts of the Green Book that do attempt to determine whether the alleged excess costs were passed on. In the instances of both alleged higher prices of domestic crude oil during the NOP and the alleged higher prices paid by subsidiaries to parents for imported crude oil the conclusion that emerges from the Green Book analysis is that there was not a complete pass-on.

These inconsistencies, and the fact that there was no systematic analysis of the pass-on of the alleged higher costs, should have alerted careful readers that there were serious problems with the Green Book's calculations of an overcharge. In general, an increase in the costs of a firm or a group of firms will be passed on only in part unless the increases are due to broad inflationary forces experienced throughout the economy.

One expert witness attempted to assess whether or not, and to what extent, the combined alleged excess costs were passed on. This evidence, which is discussed in Appendix D, was not found to be adequate by the Commission, and therefore it was necessary to deal separately with each part of the alleged excess costs and whether or not they were passed on.

One of the principal difficulties with the Director's pass-on allegations is that their focus is too narrow. The allegations deal with areas of performance which are not uni-dimensional but are treated as such. Only by proceeding within an unrealistically narrow scope is the Director able to arrive at strong conclusions and accompanying numerical estimates. The conduct of the oil firms put in question by the Director and the circumstances in which the conduct occurred are usually too complex to be summarized by a single measure.

This is the situation, for example, with the overcharge allegation in marketing. The Director calculated his estimate of excess marketing costs on the basis of studies done by certain majors at the time that showed the wholesale costs of the majors and the retail costs of their franchised outlets to be much higher than those of the independent marketers. This difference in costs is used to arrive at the estimate of excess costs. A second, and essential strand of the allegation is that the majors used predatory tactics to limit the growth of the independents, thus protecting their own high-cost networks.

The majors argued that the higher costs were the result of different types of offerings by their branded outlets compared to those of the independents. In the view of the Commission, there were sufficient differences in offerings that the costs of the independents cannot be used as a benchmark against which to measure what costs "should" have been in the sense implied by the Director's allegation.

The majors' networks were created largely as a particular approach to marketing gasoline — that of selling it in combination with automobile maintenance and repair service. An outcome of this approach and the proliferation of outlets, as a result of competition among refiners for volume, was that outlets tended to operate on low throughputs and high markups. Many of the independents were able to achieve much lower costs through specialization (by selling only gasoline), by operating from low-cost sites and by using minimum facilities. Some, such as Canadian Tire and some department stores, were able to achieve low costs through very high volumes. There were, as well, other differences between the majors and the independents (described more fully later) that gave rise to cost differences at the wholesale and retail levels. The key point, however, is that there were differences in offerings and there was no "equivalent" offering of the independents against which the majors' wholesale costs and the retail cost of their franchised outlets can be measured.

There are, of course, important questions in the area of marketing relating to matters such as excess capacity and the speed of response to changing technology and to changing consumers' needs and tastes. Another question is whether the majors impeded in an unacceptable manner the growth of the independent sector. Although there are cost implications associated with these questions, the available information does not provide an answer which could be used to assess whether or not and what part of the majors' marketing was "too high cost", or the extent if any to which higher costs were borne by the consumer.

Conceptually, the alleged excess costs relating to the cost of crude oil imports do fall within the orbit of pass-on analysis. There is, however, an analytical difficulty in defining a numerical standard against which costs should be measured, and a very practical difficulty in obtaining the data to apply the standard. While a single numerical standard is not available, evidence from a number of sources supports the conclusion that a number of companies paid more for imports from their parents than they would have had they been active shoppers in the crude oil market. Particularly compelling are the views of executives in a number of subsidiaries that their companies were paying too much. While it is possible to reach a general view regarding the level of prices paid by Canadian subsidiaries for imported crude oil in comparison with third-party prices, the difficulties in defining a numerical standard and the limited information available on comparative prices do not allow a summary number to be computed.

A fairly complete analysis of a pass-on with respect to the alleged excess costs of domestic crude oil is contained in Volume II of the Green Book. The task was undoubtedly easiest in this area. There is no argument from any side on the conclusion that the costs of crude oil to the petroleum companies in Ontario were higher as a result of the Canadian Government's National Oil Policy. The amount by which crude oil costs are increased *is* at issue.

The Director has argued that the prices paid for domestic crude oil should be compared to the cost of importing crude oil at estimated arm's-length prices. There is a difficulty with the Director's calculations even apart from the fact that the estimates of arm's-length prices are imperfect. In the absence of the NOP, refiners in Ontario west of the NOP line would not in fact have been paying arm's-length international prices. They would have been paying the prices they in fact paid for imports into Quebec, plus of course, the additional transportation costs. Whether or not those actual prices were justified, the NOP should not be blamed for causing or permitting price differences that are measured against some lower standard. Differences between actual crude oil import prices and arm's-length prices should have formed part of the Director's overcharge calculations for imported crude oil, and when this element is removed from the NOP calculations the alleged overpayment for domestic crude oil is reduced from $3.1 billion to $1 billion.

In the Commission's view it is government policy, not the companies' actions, that is at issue when considering the remaining estimated costs of the NOP, since it is difficult to see how domestic crude oil prices could have taken a different course with the policy in place. It is not up to the Commission to assess the NOP as public policy. Any overall evaluation would, however, obviously have to go beyond a measure of costs to Ontario consumers. The impact of the policy on Alberta as a result of increased prices and increased crude oil sales through greatly expanded exports to the U.S. and through increased sales to Ontario, and a resultant reduction in excess capacity in crude oil production would have to be considered, as would the feasibility and the costs and benefits of other policy alternatives.

The last item in the overcharge allegation relates to imported product attributed to high domestic prices. This allegation is partly tied to the allegation that the prices paid for imported crude oil to their parents by a number of the largest Canadian refiners was too high. The Director argued that, to the extent that crude oil costs were passed on, this encouraged the import of products whose prices reflected lower crude oil costs. A failure to pass on crude oil costs completely is also seen as resulting in product imports through a reduction in profits and, consequently, a reduction in domestic refinery investment. These are logical consequences of high prices for imported crude oil paid by a number of subsidiaries, and there is some evidence that both factors were at play. There are usually, however, a number of possible reasons for product imports and it is difficult to see what grounds the Director had for assuming that high domestic prices were the only ones that counted.

In summary, the Director's allegation of $12.1 B (1980 dollars) in overpayments by Canadian consumers is based on a series of assumptions that do not withstand close scrutiny. This does not mean that all the situations that the estimates address are unimportant to this inquiry. Some clearly are. In the Commission's view, however, these are best approached from wider perspectives than those used by the Director in making his estimates, perspectives which allow for the recognition of the conceptual and practical difficulties in arriving at judgements.

The Commissioners have written separate opinions about the allegations made in the Green Book regarding the so-called overcharge of Canadian consumers by the major oil companies in the 1958-1973 period, although in some cases the variance in their assessments is slight and interpretational.

4. Views of the Chairman

The allegations in the Green Book relating to a deliberate overcharge of Canadian consumers by the major oil companies, referred to perhaps irresponsibly by the media at the time as a "rip off", needs to be examined from two perspectives — neither of which will come as a surprise to participants in the proceedings. First, did the Director prove these allegations to the Commission's satisfaction? Second, does the evidence regarding these historical practices have any relevance to the marketplace and the public interest today?

As to the first issue, my judgement is that the Director failed to establish the Green Book allegations. Apart from questions of "excess cost", there was no proof or indeed evidence introduced during the hearings by the Director to substantiate the claim of a pass-on to consumers of so-called excess costs. As to whether or not there were excess costs, we had to look at each area where the Director alleged such "excess costs" were present.

The first of these is that Canadian subsidiaries of major oil companies paid excessively high prices for crude oil imports. This is in part a tax question, and one with which National Revenue sought to deal with varying results. Efforts to maximize profits to the U.S. parent were legitimate corporate responses unless Canadian tax or other laws were broken. National Revenue sought to monitor so-called "transfer pricing" to protect Canadian tax interests and still pursues these objectives. Limitations of staff and expertise at National Revenue may have worked in the majors' favor. This, while not explicitly a competition issue, is addressed in our conclusions and recommendations in terms of its current relevance for reasons set out in Chapter IX.

The other side of the public interest might be analyzed by determining whether or not crude oil was available in the world market at prices below those available through major affiliated channels. The analysis in Chapter VII suggests that cheaper crude oil may have been available in limited quantities. However, in my judgement, this was meaningless since Canadian subsidiaries in this industry had neither the resources nor the liberty from their parents to exploit such opportunities. Their corporate creed was tradeoffs that worked in favor of buying crude oil from and using transportation facilities of their parents.

This is not to suggest that Canadian chief executives or perhaps the boards of directors of Canadian companies did not make efforts on behalf of their own operations or minority shareholders. As indicated in the previous paragraph, there was also testimony to the effect that matters like security of supply and the use of affiliated transportation systems were more attractive than attempting to shop for cheaper crude oil. In the last analysis however, and despite occasional efforts to shop, they did not appear to have the necessary room to manoeuvre towards this objective or a clear set of workable alternatives open to them.

Apart from the efforts of National Revenue and a rather superficial survey undertaken by the National Energy Board in 1972, the Canadian Government made no apparent effort to change these practices. This may have reflected the fact that relatively little pressure was exerted by consumers during the 1958-1973 period because of the relatively low price of gasoline and heating oil. Whatever the reason, it is incorrect to allege that the majors were "guilty" of overcharging consumers as a result of their crude oil pricing policies. However, as indicated in the previous paragraph, it is also clear that Canadian subsidiaries were subject to a high degree of control by their parent companies that left them committed to a pattern of supply through affiliated channels. It is useful to think of what lessons this has for the situation today with deregulation in Canada and, at least temporarily, a world glut of crude oil. It is clear that benefits of trade liberalization and world pricing can be undermined by parental control of Canadian subsidiaries in the petroleum industry or indeed in any other Canadian industry exposed to the forces of trade liberalization with the United States, as is now being widely discussed. Certainly for the Canadian petroleum industry and Canadian markets, it is essential that no barriers to free movement of crude oil or product or the prices at which these commodities move, be created by decisions taken by the parents.

A second element of the Director's overcharge allegations relates to a possible manipulation by the majors of the National Oil Policy in the 1960s and early 1970s with consequential higher costs to consumers in some areas of the country. In my judgement, the views expressed in the Green Book reflect theoretical economic conclusions reached in isolation from broader policy objectives. The policy openly involved higher crude oil prices for those areas of Canada that had to substitute Canadian for foreign crude oil. I broadly support the analysis of the NOP in Chapter VI and consider that the Director was totally unjustified in attempting to attribute to the major oil companies the higher costs and prices that may have been brought about in Ontario west of the NOP line. Moreover, there is nothing in any of the Director's case regarding the NOP, faulty as it is in my view, that has any bearing on today's situation. Unlike the National Energy Program of the 1980s, there was support for the National Oil Policy by successive governments from both parties in the 1960s and early 1970s — and like any national policy, its benefits and costs varied in different regions of Canada.

The final element of the so-called overcharge relates to excess costs related to gasoline distribution. For reasons explained in Chapter V, its inclusion in the overcharge allegations is also unwarranted.

The most important contribution the Commission can make is in its *appraisal and recommendations regarding competition in the Canadian marketplace today*. This has been done and our agreed conclusions and recommendations are set out accordingly. Nevertheless, given the seriousness of the Green Book's allegations re the so-called overcharge and the media's reaction at the time, I consider it very important to set the record straight based on my assessment of evidence and argument received by the Commission in the lengthy part of the hearings devoted to this issue because of the Director's allegations in the Green Book.

The Director's case that Canadian consumers were overcharged between 1958 and 1973 as a result of actions of the major petroleum companies was misconceived. There was no proof placed before the Commission that Canadian petroleum companies overcharged consumers by 12 billion dollars or that, indeed, any measurable excess costs were passed on in any significant degree between 1958 and 1973. Efforts by the Director devoted to that bit of history could have been much more productive in examining current practices in the industry and would have shortened the inquiry.

5. Views of Dr. Roseman

The following conclusions may be stated with respect to the Green Book's allegations that excess costs were incurred and that they were passed on to consumers:

(a) Regarding the importation of crude oil:

i) There was an excess cost.

ii) There is no way of responsibly calculating the excess although the Green Book overstated it.

iii) There is virtually no direct evidence of a pass-on. To the extent that there may have been a pass-on it would have presumably taken the form of higher gasoline prices caused by deficiencies in the operation of Canadian markets.

(b) Regarding the NOP:

i) There was no excess cost attributable to actions of the oil companies.

ii) In any event the Green Book calculation of the higher costs was substantially overstated.

iii) Most of the higher costs resulting from government restrictions imposed by the NOP would have been passed on to consumers in Ontario west of the NOP line.

(c) Regarding alleged inefficiencies in marketing:

The conceptual difficulties of attempting to identify, let alone calculate, any excess cost or pass-on in this regard are so severe that in my view the "overcharge" framework of analysis is not helpful or illuminating. It is an extremely narrow and static framework in any event, and it is particularly so when the essential question has to do with the speed and nature of industry adjustment in differing markets and over a lengthy period of time. The underlying issues require a more complex and judgemental analysis.

(d) Regarding imported products:

i) There was an excess cost to the extent that products were imported as a result of unnecessarily high costs of imported crude oil. Some imports probably occurred for these reasons but the proportion is unknown.

ii) Therefore, the extent of the excess costs cannot be responsibly calculated although the Green Book undoubtedly overstated them.

iii) Whatever excess costs existed were passed on, primarily to consumers east of the NOP line.

V

The Allegation of Excess Costs in Gasoline Distribution

1. Introduction

More so in marketing than in the other areas, the allegation of excess costs is derived from a complex background. This background consists of the organization of the marketing of gasoline at the time, the differences between the offerings of the refiner/marketers and the independents, and the allegations with respect to the conduct of the majors relative to the independents. The Green Book side of this story is covered in Volume VI, the largest of the Green Book volumes.

The backdrop to the discussion of cost differences between the majors and the independents is the structure of retail gasoline distribution and the forces that acted on it. Access to retail gasoline sites through ownership or lease was regarded as a necessary condition for entry into refining in Canada. The refiners owned many sites, particularly in the large urban areas; they also competed among themselves for sites owned by others. They offered equipment and financial capital as inducements to gasoline dealers or would-be gasoline dealers to sign with their respective companies. The result was a series of large networks of gasoline stations. In Quebec, and to a lesser extent in Ontario, the competition for outlets was fueled by entrants such as BP, Fina, Murphy (Spur) and Ultramar, who drew on their own supplies of plentiful, imported crude oil, or who had access to cheap crude oil.

The increase in the number of outlets occurred during a period of very rapid growth in the demand for gasoline.

The majors' stations were built predominantly around the concept of combining the sale of gasoline with automobile maintenance, repair and parts replacement. Pricing of gasoline at retail was the domain of the franchisee rather than of the major. The refiner established prices at the wholesale level. The wholesale delivered price to dealers was the dealer tank wagon price (DTW).

This marketing system was subjected to attacks from several directions. Entry by independent marketers created competition not only in the sale of gasoline but also in the provision of alternative approaches to automobile repair and parts supply (e.g., Canadian Tire and Sears). There were also other forces acting on both the demand and supply sides of the automobile repair and maintenance business: automobiles were becoming more sophisticated, thus requiring specialized skills to repair; the need for oil changes and lubrication, both important sources of revenue for garages, were becoming less frequent; and original equipment such as tires were lasting longer. The competitive position of the local garages was further weakened by the development of chains of specialized repair outlets offering such items as mufflers, transmissions and brakes.

Although the changes in demand for the automobile repair services of the standard or traditional combined garage and gasoline retail outlet were gradual, the events of the 1960s described above reduced the number of outlets that could be supported by the maintenance and repair side of the operations, a trend which continues even today.

The challenge of the independent marketers occurred during the incipiency of the changes in demand for repair and maintenance. The competition from the independents rested on the key consideration that many consumers were willing to divorce purchases of gasoline from repair and maintenance services. Although some of the chains of outlets operated by independents were traditionally structured, some of the largest and most successful independents offered a different approach to the marketing of gasoline. Another difference was the offering of less than what might be described as the "Cadillac" service and image that the majors strove for in their outlets. Many independents operated on side streets and some, with very limited facilities. However, there were others, particularly the larger ones, who also stressed image and service.

The essence of the challenge was, however, price. As mentioned above, the majors set wholesale prices and the dealers set their own retail prices. There was little point in any of the majors reducing their wholesale price in an effort to gain market share; because of the small number of competitors, such reductions would be matched by the other sellers. Thus competition tended to take the form of promotions (e.g., contests, kitchenware) that were regional or system-wide and that could be supported by advertising. The independents approached pricing in a different way from the majors because they were different. They provided different offerings which, as discussed subsequently, resulted in lower costs; they had small market shares and to some extent, might have been able to price below the majors' outlets without drawing a response; and they had control over pricing at their outlets, giving them a significant advantage *vis-à-vis* the majors who did not generally control the pump price at their franchised outlets.

With very few exceptions such as Murphy/Spur, which was a partial major in that it had a processing agreement and imported its own crude oil, the independents priced below the majors — some by only a cent or two, and others by as much as 10¢ to 14¢ per gallon (2.2¢ to 3.1¢ per litre). The latter difference was equal to or greater than the entire retail margin of the majors' dealers (i.e., the difference between the price they charged and their wholesale costs or DTW price). The amount that the independents could price below the majors' outlets depended on the competitive response of the majors' dealers and of the majors themselves. There were often prolonged price wars as the prices at the majors' outlets were reduced to levels equal to or closer to the prices of the independents. Similar events, in less dramatic form, were shaking other areas of retailing, where discounters introduced approaches based on high volume and on lower costs and markups.

It is clear from the evidence that there would have been a significant reduction in the number of the majors' retail outlets and much greater increases in the market shares of the independents had there not been a change in the pricing practices of the majors. Without some form of aid from the majors, many of their dealers would have been unable to withstand the competitive pressure; at the lower retail margins needed to meet or approach the prices of the independents, they would not have had sufficient earnings to survive. Survival at lower margins would only have been possible if the number of outlets had been significantly reduced to enable the remaining outlets to attain higher average volumes and, consequently, lower costs per unit of sales.

Under ordinary pricing arrangements, the only way that the majors could support their dealers and protect their market shares was through a reduction in DTW prices. According to the argument of some of the oil companies, this would have been expensive for the majors since the zone covered by a DTW price was generally greater than the area affected by competition from independents. For example, the DTW price might cover all of Metropolitan Vancouver or Winnipeg, while the competitive situation was restricted to one or several districts. Under the support methods adopted by the majors, the prices charged to the dealers were geared to the prevailing retail price in their area, or the dealers went on consignment. Under the latter arrangement, the title to the gasoline at the station reverted to the refiner, and the dealer became an agent (temporarily) of the refiner. The use of consignment as a means of supporting dealers offered an important strategic advantage to the refiners because, as owners of the gasoline, they could set the pump price without contravening the price maintenance laws. They could thereby let the independents know directly what, if any, differential in prices between the independents and their branded outlets was acceptable to them. Instead of the competitive struggle being one between the independents and the branded dealers, it was waged between the independents and the majors.

The comparative costs of distribution of the majors and the independent marketers is important in the context of a section 47 inquiry because of the allegations of misconduct made against the national majors by the Director. These allegations were that the majors used margin-support programs for their dealers, second brands, and, after 1970, their supply policies, to engage in predatory activities against the independents. The margin-support programs involved departures from the ordinary DTW or wholesale price to dealers in order to respond to local competitive conditions. In using brands other than their principal brands, the majors were able to provide offerings similar to those of some of the independents (i.e., full-service gas bars) without affecting the image of their principal brands. The Director further alleged that in supplying independents some majors attempted to raise the wholesale prices paid by the independents relative to retail prices so that the margins available to the independents would be squeezed. The sum of these activities, the Director alleged, resulted in restrictions on the entry and growth of independents. Thus, the measurement of the differences in the costs of distribution between independent marketers and majors is an attempt to establish the costs to society of this alleged misconduct. Implicit in this measurement is the view that, but for the alleged restrictions on the entry and growth of the independents, the industry would have been different and the pressure of competition would have resulted in the elimination of alleged inefficiencies in the distribution system. The allegation of excess costs is, in a sense, the bottom line of an interrelated set of allegations.

A number of questions arise from the Director's allegations in Volume VI. There is no doubt about what the majors did in the marketing area: they did and do engage in support programs for their dealers, and they did and do operate and sell through controlled outlets carrying brand names different from their primary brand. The unanswered questions relate to what were and are the causes and effects of these practices. These practices were introduced primarily, if not solely, because of the presence of independent marketers. To the extent that the practices succeeded, they limited the growth of independents. To what extent was the market operating as it should in this process, and to what extent, if any, were the practices of the majors undesirable so far as the public interest is concerned?

The Director did not introduce additional evidence on the Green Book period at the Commission's hearings. The oil companies introduced evidence relating to that period however, and in their submissions and in studies prepared for them, have argued that the Director's interpretation of events is wrong. The gist of these replies is that the industry responded to changing consumer needs in a responsible and reasonably timely way; the changing demand was gradual and, in any event, networks are not transformed overnight. Given that the investments in the stations were already in place, it was reasonable and perfectly proper for the majors to price, if necessary, at levels which did not cover average total costs. Above all, they submitted that they did not have the power to engage in predatory conduct - their costs, on the Director's own evidence, were higher than those of the independents, and entry into marketing was easy, so there was little point in trying to destroy existing rivals who could quickly be replaced.

However, as discussed in Chapter XIV, there have been many important changes in gasoline marketing since 1973. The context in which the majors' marketing practices have to be evaluated is radically different from that of the 1958-1973 Green Book period. This is particularly important, not only in evaluating the likely effects of certain practices, but also in framing recommendations. Accordingly, the Commission's findings and recommendations with regard to marketing are reserved until there has been a discussion of the evidence from recent years.

The historical material is important to the current issues which still concern, in large part, the relationships of majors to independent marketers as suppliers and competitors. While it can be concluded that the Director's case regarding the specific allegations relating to the Green Book period have not been proved, it cannot be said that the issues raised by the Green Book material can be dismissed. The Commission has chosen to address the policy questions before it in the context of contemporary conditions and in the light of the evidence it has heard. The Director's allegation of excess cost is, however, discussed in this chapter.

2. The Allegation of High-Cost Gasoline Distribution

The sources of the Director's estimate of higher distribution costs are internal oil company documents comparing their own costs with those of several types of independent distributors of gasoline. The internal oil company studies, dating from 1964 to the early 1970s, concluded that independents offering a wide spectrum of approaches and services were able, because of their ability to operate at much lower costs per unit of sales, to offer lower gasoline prices and to earn much higher rates of return than the majors. Many of the studies warned of the need for the majors to change their marketing approach if they were to prevent very large market-share gains by the independents. By 1970 the independents and the majors' second-brand outlets held, according to an Imperial Oil estimate, 14.6 per cent of service station gasoline volume in Ontario. Comparable figures were 6.6 per cent in 1960 and 9.2 per cent in 1965. These offerings, almost all involving lower prices than the majors' branded outlets, were obviously appealing to an ever-growing percentage of consumers.

From the range of cost differences arrived at by the majors, the Director selected a 6¢-per-gallon (1.32¢/l) cost difference as representative of the cost difference between the majors and the independents offering a "service station package roughly similar to that provided by the majors themselves." To convert this per-gallon cost difference to an annual "excess cost," the Director multiplied the 6¢ per gallon times 50 per cent of his estimate of annual sales by gasoline outlets. The latter figure was based on the assumptions that: the independents held 20 per cent of the retail market and their operations were low cost and hence (in the Director's view) "efficient"; and 30 per cent of total retail gasoline sales were by branded major outlets in rural areas where low-volume, high-cost operations could be justified by the low population densities.

The numerical and other assumptions were subjected to a number of criticisms. The amount of gasoline sold through gasoline outlets, as shown in the Green Book, is too large since sales of gasoline sold through other channels (e.g. agricultural trade) are included, which leads to an overestimate of the amount of the excess cost. On the other hand, there is an error in the opposite direction because the market share for independents used by the Director is too large.

A consideration of the other assumptions takes one to the core of the Director's approach, which is that the 6¢-per-gallon cost difference is based on a comparison of independents with a "service station package roughly similar to that provided by the majors themselves". This is a critical element, because without it there is no ready way for the Director to evaluate the cost level of the majors' outlets. Although there were many independents who had larger cost advantages than 6¢ per gallon, it is obvious that their offerings differed from those of the majors and that, therefore, a comparison of their cost levels is not meaningful in evaluating the efficiency of the majors' operations.

The focus of the criticisms in the majors' submissions is that the independents were not providing offerings that were the equivalent of those of the majors. The majors' outlets typically included two or three service bays. While a number of independents had similar offerings, and the Director claims to have based his estimate on these independents, the evidence shows that there were important differences in the offerings due to location and to the physical appearance of the outlets. Canadian Tire, or mass merchandisers such as Sears or Woodward's were looked to by the Director in making his cost comparisons. The outlets operated by these companies were, however, virtually impossible to duplicate because they enjoyed unique consumer loyalty and advantages of location. As very high-traffic outlets they were able to provide speedy service at low cost. With relatively small discounts off the majors' prices in comparison with most of the other independents, their significant cost advantages (as calculated for Canadian Tire by Imperial) were converted into high rates of return. Firms such as Caloil, which operated primarily in Quebec and to some extent in Ontario, and Arrow, an Ontario firm, had chains of outlets, some company-owned and some operator-owned, with service bays. These were described by Imperial analysts in the source documents used by the Director as being less advantageously located or not as well maintained as the majors' outlets. In view of these differences, the Director's approach of using a counterpart operation from among the independents with "roughly similar" offerings to measure the efficiency of the majors' outlets is subject to serious question.

While the Director's approach does not allow calculation of "excess cost," it is useful to consider the nature of the cost differences between the majors and the independents as a means of more fully understanding the Director's calculations. In particular, the Director's stress on capacity utilization as the source of the cost differences is only partially supported by the evidence. However, it is understandable that the Director would focus on this variable, as have several provincial Royal Commissions into gas marketing, because it is sometimes a driving force in short-run competition between outlets and has been a critical consideration in the majors' ongoing efforts to rationalize their networks.

3. Differences in Wholesale Costs

The cost differences in the Green Book allegation covered both retail and wholesale costs. Wholesaling and retailing do not always fall into neat, unchanging categories. There are particular difficulties in the case of gasoline marketing because the cost of what might be considered a retail activity is sometimes borne by the wholesaler. The wholesaler obviously hopes, in these cases, to recover these outlays in the wholesale price.

The most clearly identified wholesaling cost is that of transporting gasoline from a storage terminal at a refinery or other site to the retail outlet. Only a few large independents who imported products operated terminal facilities.

The large cross-merchandisers who had entered into gasoline retailing — Canadian Tire, Sears and Woodward's — purchased their gasoline on a delivered basis. Those independents who either operated or franchised a large number of outlets or sold furnace fuel tended to operate their own delivery vehicles.

During the 1960s, many of the independents did not honor credit cards. Among the majors, the credit and accounting costs of credit cards were borne by the refiners. In other industries these costs, which are incurred at the retail level, are ordinarily paid by the retailer. The most important category of wholesale costs for the majors however, were those associated with brand promotion and accounting.

The distinction between costs borne by the wholesaler and those borne by the retailer is most difficult to establish with respect to the investment in the outlets. In cases where a major owns the station and does not obtain full cost recovery through rents,[1] or where it provides aid for the purchase of pumps or tanks to operators who own their own station, these costs are recovered in whole or in part in the wholesale price. These site costs are part of the retail costs.

The analyses of the majors acknowledged that the independents had lower wholesale costs. In some cost areas, most independents totally avoided certain costs — e.g., those related to advertising and credit cards. In other cost areas, their advantages appear to have been derived from being smaller or from concentrating on limited geographic coverage. In other words, unlike the majors, they were not committed as a group to creating a large system of outlets of a particular type and were thus able to concentrate on taking advantage of their unique marketing and/or managerial strengths.

4. Differences in Retail Costs: Capacity Utilization

In comparing the costs of the majors with those of the independents, the Green Book stresses the cost differences arising from service station pump-capacity utilization. There is a difficulty in making judgements in this area because gasoline outlets differ in consumer appeal depending on factors such as their location and appearance and in the quality of service offered, including required waiting time. Ultimately, only the marketplace can provide definitive answers to desirable trade-offs between higher capacity utilization and lower unit costs versus better service. Less certain answers may be required, however, where there are questions as to whether consumers are being allowed adequate choices.

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[1] The standard used by the petroleum companies for estimating cost recovery is not clear, although cost recovery is referred to at a number of points in the evidence. While the property is dedicated as a motor fuels outlet owned by the oil company in question, the relevant cost should be the value of the property when operated in the most efficient manner — i.e., whether as a tenant-operated or company-operated outlet. The standard employed might also be the estimated highest value use of the property were it converted to another possible use — i.e., its market value. If the former standard were used, it is difficult to see why the necessary changes to optimize the value of the property would not be made. If failure to obtain rents associated with the value of the property in its most valuable use is involved, then it must be assumed that this is a price that the oil companies are willing to pay in order to have controlled volume.

Capacity of any given facility is measured as the amount that the firm would like to sell at a given price. This measurement is difficult when demand fluctuates by time of day and week, and when a service is being sold. Measurement of capacity then depends in part on the consumers' reactions to having to wait for service. Idle capacity during non-peak periods is a necessary cost of fluctuating demand. The pattern of quantities demanded is, however, not immutable. It can be more evenly spread as a result of different prices being charged depending on capacity utilization or by slower service during peak periods. Additionally, each firm decides whether the potential lost profit, because of lost trade due to lengthened waiting time, is worth the avoidance of the cost of building more capacity.

The amount of capacity any firm and industry can afford depends on available profit margins. In the petroleum industry, the margins in question were not solely those at the retailing level, but were those in refining and imported crude oil further upstream as well. Refiners competed hard for retail outlets because they represented relatively secure volume which could mean reduced excess capacity in refining and increased profits on imported crude oil.

As long as it pays firms to cut prices in order to obtain additional volume there is unused capacity. The evidence shows that independent marketers tried to reduce their prices relative to those charged by their competitors precisely to increase their volume. Unused capacity is, in fact, a necessary condition for the price wars that occur in gasoline marketing. While it is difficult to measure unused capacity, and it cannot be concluded that this was a more serious problem in gasoline marketing than in other industries, it has been a characteristic of the industry for a long time. It has been a point of concern in several provincial inquiries into petroleum marketing (e.g., British Columbia, Alberta and Nova Scotia). Estimates of unused capacity were made in Alberta and British Columbia.

As discussed earlier in this chapter, the marketing systems of the majors were subjected to a number of ongoing shocks and pressures for change. Without these shocks and given reasonable projections on growth, would there still have been significant unused capacity? The difficulty is that once the outlets are in place and a substantial percentage of the investment in the outlet is sunk (i.e., non-recoverable on a sale), the outlets can be operated for a long time as long as an adequate return is earned on the non-sunk portion of the investment. Moreover, since the original investments were based on different market conditions, unused capacity does not necessarily indicate inefficiency. This analysis and argument has been most clearly stated by Professors M. Fuss and L. Waverman, who appeared on behalf of Gulf. The issue, on the performance side, then resolves itself into one of trying to evaluate the speed of adjustment of the number and types of outlets, which requires a judgemental assessment of practices or market conditions that inhibited or retarded the normal process of change.

In addition to the potential importance of sunk costs as a drag on the adjustment process, a significant part of response time was due to the large size and the vertical integration of the majors. Refining and marketing are considered by the refiner/marketers as a combined operation, with marketing providing the assured outlets for the refinery's output. Retail outlets (and market shares) are thus a critical element, not just in terms of what they represent with respect to the strength of the marketing organization, but with respect to the extent to which they provide a ready means of disposing of the refinery's output. Thus, while majors such as Imperial and Gulf knew that a more cost-effective approach to selling gasoline was necessary if they were not to yield continuing market share to the independents, it would have been obvious that any rapid closure of outlets by any single major would not only have made it vulnerable to inroads by other majors, but by the independents as well. The problem was to find new approaches to selling gasoline that complemented and, in large part, replaced the two- or four-pump, two- or three-bay service stations. It was not until the majors successfully introduced self-service outlets into their networks that they found a marketing approach that permitted them to cut back fairly quickly on the number of retail outlets while maintaining market shares.

The Green Book stresses the levels of capacity utilization in the cost comparisons between the majors' and the independents' outlets. This factor was only a part of the majors' perception of their cost disadvantage *vis-à-vis* independents of all types however, and it would require considerable speculation to try to extract from the companies' analyses the portion of their higher cost which might be attributable to under-utilized capacity.

The higher volumes generated by coupons, lower prices and, in some important instances such as Canadian Tire, the style of outlet, probably permitted higher rates of capacity utilization for the independents relative to the majors. The earliest systematic data are available from 1973. In eight cities west of Montreal, the independents had sales per station much larger than those of the primary brands of the majors (Esso, Shell, Gulf and Texaco) and the regional refiners. Compared with the majors these were, on average, 65 per cent higher in Vancouver, and between 25 per cent and 39 per cent higher in Edmonton, Regina (1974 data), Winnipeg, Metropolitan Toronto, Vaughan/Markham, Oshawa/Whitby and Ottawa. In Montreal, however, the majors had 26 per cent higher throughput per station than the independents. Compared with the regional refiners, the independents were on a par in Montreal and were a minimum of 49 per cent higher in the other centres. As might be anticipated, there is no clear pattern when the independents' brands are compared with the majors' second brands. The latter were designed specifically to compete with the independents' brands on price.

Estimates of the average sales volume per station are contained in an analysis by Imperial of its competitors in Ontario, prepared in about 1971. These data show a much larger difference between the independents and the majors than those found in the Kent data. Imperial's outlets, which had the highest average sales volume of all refiners' outlets, had average sales of 155,000 gallons per year. The average of all independents (14) included in the Imperial analysis was 416,000 gallons per year. Outlets of independents acquired by refiners and operated by the majors as second brands had average sales of 332,000 gallons per year. Both ends of the range include outlets of companies not known as significant price cutters. At the high end are the outlets of Canadian Tire, with average sales of 1.4 million gallons per year, and at the low end are Murphy ("Spur") and Ultramar ("Golden Eagle"), with 190,000 gallons per year and 106,000 gallons per year, respectively. When the outlets of these companies at both ends of the range are excluded, the average falls to 388,000 gallons per year, which is still more than twice the average of the Imperial outlets. These comparisons probably overstate the differences between outlets in the same geographic markets. Many of the Esso-branded outlets were low-volume, dealer-owned outlets in rural areas. The average volume of outlets owned by Imperial in all of Canada was 322,000 gallons in 1970, in contrast to 91,000 gallons in dealer-owned outlets.

Caution is required in using sales per station as a measure of capacity utilization, profitability or "productivity" in the absence of subsidiary information. Nevertheless, these results do indicate higher capacity utilization by the independents in most geographic markets, since it is unlikely that the independents were employing more material resources per station (number of pumps and size of lots) for the sale of gasoline than were their competitors. Thus the independents' outlets, with the exception of Montreal, were obtaining more of the available advantages from spreading fixed costs over larger volumes than were the majors' outlets. There is no evidence to suggest, however, that the independents were generally close to capacity operation.

5. Other Differences in Retail Costs

Another important cost disadvantage of the major brands at the retail level, which was identified in analyses contained in the oil companies' documents, was the higher margins taken by the operators of the majors' outlets, which doubtless related in part to differences in the volume of sales. A second cost disadvantage, which had implications for the organization of outlets in the long run, was the difference in types of labor required in what had become the typical major-brand outlet compared to that used in independents' outlets. Apart from a few independent chains that combined gasoline sales with automobile maintenance and repair, the marketing of gasoline was a stand-alone or specialized activity in many of the independents' operations. Even at Canadian Tire outlets, where all the goods and services offered by the local service stations were available, gasoline sales were separated from maintenance and repair services. By limiting their sales to gasoline, many of the independents were able to replace more costly skilled labor with less costly unskilled labor. This is in marked contrast to the small business and mechanical skills of a traditional service station where the owner functions as a mechanic. The management skills might well be applied to the supervision of a number of gas bars. Similarly, the use of skilled personnel from time to time to pump motor fuel is a high-cost way to sell these products.

Reference was also made in the oil companies' analyses to the higher site costs of the majors. Total site costs were obviously much lower for independents who operated gas bars out of very limited physical facilities. In addition, some of the sites used by cross-merchandisers such as Canadian Tire may not have had any alternative use other than as parking space. Whether they were lower on a per-gallon basis would depend, in part, on how repair and maintenance activities affected overall site costs and the perception of the margin required from gasoline sales. This is very important since the greater part of revenues net of material costs was often derived from the bays, not the pumps. Repair and maintenance activities at many outlets were undoubtedly profitable. The rapid closure of service bays following the move to self-serve outlets by the majors suggests, however, both unused capacity in gasoline marketing and in automobile repair and maintenance services, as well as the ability of many sites to generate higher returns when specializing in motor-fuel sales. In any event, the higher site costs would translate into a perceived need for higher combined retail/wholesale margins. The extent to which these costs would enter into the wholesale margin would depend on whether rents on company-owned outlets fully covered site costs, or whether there was a shortfall that refiners attempted to recover in wholesale prices.

6. Summary and Conclusions

1. The industry background to the Green Book allegation of excess costs in gasoline marketing is complex. It involves allegations that the pricing practices of the majors, their dealer-support programs, and their use of second brands prevented and slowed the adjustment process in retail gasoline marketing that was required to meet changing consumer demand and to reduce unused capacity. At issue here is the difficult question of distinguishing abusive or predatory conduct from legitimate competitive responses.

2. With respect to these practices there is much fuller evidence from recent years. There have been very significant changes in the industry and any conclusions and recommendations must be related to current conditions rather than to historical circumstances. While the Commission regards the material and arguments relating to the Green Book period as important in aiding its understanding and appreciation of the industry, it believes that the practices complained of by the Director and by a number of independents can best and most usefully be evaluated in the light of contemporary conditions.

3. The majors' cost comparisons, and a wide range of lower prices charged by independents relative to the majors' outlets, leave no doubt that the independents had lower combined wholesale/ retail unit costs than did the majors and their franchisees. It is these cost differences that the Director has drawn on in his allegation that the majors' marketing costs were too high. For this criticism to be valid, it must be demonstrated that the independents, whose costs are used as a standard of comparison, had the same or very similar offerings to those of the majors' outlets. This the Director failed to do and therefore, the Commission does not concur with the Director's identification and measurement of excess costs.

VI

The National Oil Policy

1. Introduction

The National Oil Policy (NOP) and the broader context in which it was established and operated — U.S. protection of its crude oil industry — are the key to understanding domestic crude oil pricing and product prices in the 1960s and the early 1970s. The material in the Green Book concerning the NOP is, in addition to the brief section in Volume I dealing with the overcharge, contained in Volume II, *The Domestic Sector: An Overview of the Environment, Industry Behaviour and Performance.* That volume discusses the pricing of domestic crude oil and the effect of crude oil prices on product prices in Ontario. In addition, there are documents seized from the oil companies, their written arguments concerning the Director's material, and much public material on the NOP which was available prior to the inquiry.

The material in Volume II was not pursued by the Director in further evidence during the hearings after the Green Book was submitted to the Commission. As the material is historical and is not of current policy interest, the Commission also chose not to go beyond the written material originally put in evidence by the Director and the subsequent responses of the oil companies.

The NOP was a long standing and widely accepted federal government policy in effect from 1961 to 1973. This policy and the way in which the major oil companies allegedly responded to it, are the basis of the Director's allegation that domestic crude oil prices were too high and resulted in excessive prices being paid by Ontario consumers for petroleum products. Underlying this apparently bald allegation is a complex set of facts which have several dimensions.

2. The Background

The circumstances that led to the NOP and its implementation are as follows:

1. Approximately 50 per cent of Alberta crude oil field capacity was unused. This excess capacity was largely the result of the way in which provincial authorities had prorationed demand among producers.

2. Hopes for an improvement in the situation of crude oil producers were threatened by protectionist sentiments and by alleged security of supply considerations in the United States which led to voluntary quotas on crude oil imports during the mid-1950s and to mandatory quotas in 1959.

3. The Federal Government was under considerable pressure to alleviate the situation.

4. A Royal Commission (the Borden Commission) on energy was appointed and it recommended that the Government should not use a legislative/regulatory course, but rather should rely on the voluntary cooperation of the industry. Two proposals were considered by the Royal Commission. One was that the crude oil pipeline from Western Canada be extended to Montreal. The other, which the Commission adopted, called for the substitution in Ontario of foreign crude oil and products refined therefrom with products refined from domestic crude oil. Efforts were also to be made to increase exports to the U.S. The building of a pipeline to Montreal would have meant, under the Alberta prorationing system, that sales would have been shared among the majors and the independent crude oil producers. This would have meant a loss of sales for the parents of the Canadian subsidiaries who were supplying, with minor exceptions, all of the imported crude oil needs of these subsidiaries.

5. An additional critical dimension that the Government had to consider in setting policy followed from its successful efforts to have Canadian producers exempted from the U.S. import quotas. The exemption was conditional: voluntary guidelines were set for the increase in Canadian exports, as were requirements on the import of crude oil into Canada. The latter condition was set because the U.S. did not want Canada importing cheap crude oil while it sold into the U.S. market at the more expensive U.S. price.

6. The policy established by the Government followed the recommendations of the Borden Commission and was consistent with the conditions imposed by the U.S. for continued free access of Canadian crude oil. Output targets were set for the industry, with part of the desired increases to come from a gradual growth in exports to the U.S., and the other part to be obtained from the displacement of imported crude oil and products entering Ontario by domestic crude oil. The NOP line,

which was essentially the Ottawa Valley, was established with the area west of the line reserved for domestic crude oil. While no laws or regulations were drawn up, clear policy statements by Federal Governments between 1958 and 1973 left no doubt as to the objectives and operation of the policy. Targets, including exports to the U.S., were to be met through the voluntary efforts of members of the industry.

7. The voluntary nature of the NOP was changed in 1970 when mandatory quotas on gasoline, to be administered by the National Energy Board, were imposed following several years of complaints by Ontario refiners regarding product flows westward across the NOP line.

3. The Effects of the NOP

(a) Prices of Crude Oil

Historically, field prices for Alberta crude oil were set to compete in Ontario and in other marginal markets. Until around 1958, the prices of U.S. crude oil determined prices in Ontario. U.S. prices were set to compete with offshore crude oil. This meant that although Canadian prices were directly influenced by those in the U.S., they were indirectly geared to meet potential competition from offshore imports. Following the move to protectionism in the U.S., Alberta prices responded directly to the laid-down cost of offshore imports in Ontario. With the establishment of the NOP line this was no longer necessary, nor in the long run possible, if exports to the U.S. were not to exceed the amounts agreed to in the understanding with the U.S. Prices were increased in 1961 and 1962 following changes in exchange rates, and were held constant throughout the rest of the 1960s when crude oil prices outside of North America were falling.

Prices of crude oil were established when refiners "posted" the prices they were willing to pay for crude oil, with price variations depending on the crude oil type. Imperial Oil was the undoubted price leader. It had a large presence at all levels of the industry. At the end of the Second World War it held well over 50 per cent of refining capacity. Although its market share fell over the years, it continued to have the largest presence at all levels of the industry.

Output of crude oil was controlled by the Energy Resources Conservation Board of Alberta through the allocation of production so that total supply exactly matched stated demand (nominations of refiners). Demand for Alberta crude oil depended on its price, not because of any great price sensitivity in the demand of existing final consumers, but because its price determined which markets it could penetrate in competition against U.S. and offshore supplies. Excess production capacity, since it could not translate into any greater supply than that allowed by the Conservation Board, did not create any direct pressure on price.

Access to the protected U.S. market meant that the usual rule for penetrating markets had been reversed; instead of price reductions, price stability and price increases were required in order not to violate the rate of growth of exports established by the U.S. Government. Given the existence of the NOP, in which exports to the U.S. were a critical part in terms of alleviating excess capacity, it is difficult to see what other outcome might have been expected.

The largest part of the Director's overcharge allegation relates, in fact, to his separate allegation that the costs of imported crude oil were too high. His estimate of the alleged overcharge ($3.1 billon in 1980 dollars) was prepared by comparing the delivered price of domestic crude oil in Ontario with an estimate of the landed arm's-length price of foreign crude oil in Ontario. The difference between the price paid by subsidiaries to related companies and the estimated arm's-length price is not, in essence, a cost related to the NOP. In the absence of the NOP or any comparable government policy, refiners in Ontario would have paid for crude oil what in fact they paid for imports into Quebec, plus of course, the extra transportation costs. The NOP ought not be measured against some other lower standard that did not exist and was unrelated to the NOP.

This point is particularly clear when the pre- and early-NOP years are considered in Table 1. During 1958 to 1962, the alleged difference between the estimated arm's-length price and the price paid to affiliates accounts for all of the alleged overcharge by the oil companies made possible by the NOP, which was announced in February 1961. At least $480.2 million (1958-60) of the alleged overcharge occurred before the NOP came into effect. No explanation is provided for this part of the calculation.

The Director explained his position as follows:

> The National Oil Policy, in that it reduced the Canadian market available for imported crude, would have reduced the incentive for entry in this market. This in turn would have placed less pressure on the multinationals to reduce their reported crude costs to equal world 'competitive' prices.
>
> Prior to the implementation of the Policy, the difference between reported landed costs and competitive landed costs was declining for Texaco. After the Policy came in effect, it increased once again.

This slender argument is used to attribute all of the differential between "competitive" crude oil costs and reported crude oil costs, totalling $2.1

billion to the NOP. For example, the Green Book concluded that in 1964 excess costs equal to approximately $276 million were incurred as a result of the NOP. Of this estimate, $70.9 million is due to a measurement of the difference between the prices paid by refiners in Ontario for domestic crude oil and by refiners in Quebec for crude oil imported from their parents. The remaining $205.1 million is attributable, according to the hypothesis in the Green Book, to what would have occurred to the prices paid by Canadian subsidiaries for imported crude oil in the absence of the NOP. This part of the estimate, shown for each of the years in Table 1, is therefore, unsupported.

Table VI-1

The Role of Estimated Arm's Length Import Prices in the NOP Overcharge Allegation

Overcharge Attributable to Import Price Differential
Between Reputed Prices and Estimated Arm's Length Prices

Year	Percentage	Amount (in 1980's dollars)
1958	100.00	144,709,716.00
1959	100.00	168,277,526.00
1960	100.00	167,239,116.00
1961	100.00	193,387,597.00
1962	91.98	203,611,732.12
1963	80.82	223,357,488.08
1964	74.32	205,120,664.95
1965	62.01	178,446,341.95
1966	57.44	163,163,100.16
1967	53.12	144,235,820.74
1968	43.99	91,018,908.38
1969	40.38	93,924,919.79
1970	49.81	100,458,835.77
1971	0	—
1972	0	—
1973	—	—
TOTAL		2,076,951,766.94

Source: Table A-9, Volume I of the Green Book.

(b) Product Prices

A comparison of product prices on both sides of the NOP line provides evidence on whether or not higher domestic prices for crude oil were passed on to consumers. Two sources of information were used in the Green Book in comparing wholesale prices east and west of the NOP line. One source is the internal documents of the oil companies, which provide both direct and indirect comparisons. The other is the published information by Statistics Canada on the value of shipments from refineries located in Quebec and Ontario. For reasons discussed in Appendix C, the Statistics Canada data are not useful for discussing differences in wholesale prices.

The only evidence on wholesale prices from internal company records covering the entire period of the NOP is Imperial's dealer tankwagon prices and competitive allowances for regular gasoline in Montreal and Toronto. Gasoline prices are shown in Table 2. Both wholesale prices and dealer margins are similar until June 1963 when the dealer tankwagon price in Toronto was raised one cent above the level in Montreal. This created a short-lived difference in the posted dealer tankwagon price, but, as shown by the actual return to the company of 16.8¢ per gallon, there was considerable downward pressure on prices, which evidently led to a drop in the posted price at the end of July. The first lasting divergence between Toronto and Montreal prices occurred in 1964. Although posted prices were the same in the two cities at the end of 1963 and at the beginning of 1964, dealers in both locations were on consignment and the return to Imperial from consignment sales was one cent less in Montreal. In June 1964 Imperial substantially dropped posted prices in both locations and maintained the one-cent differential. A wider difference soon developed as prices firmed in Toronto, and consignment was used only on two occasions after 1965. In Montreal, price pressures intensified and the return to Imperial Oil under the temporary allowance program (in lieu of consignment) fell sharply in 1965 and did not appreciably recover until 1970.

Data from Shell and Gulf are available for regular leaded gasoline and furnace fuel for 1966-70 and 1969-73. Shell's information consists of the netbacks it obtained in its "Eastern" and "Central" marketing regions. Netbacks differ from prices insofar as certain costs are subtracted; however, if costs do not vary appreciably between regions the differential in netbacks can be used as an indication of price differences. Gulf's data are netbacks in Ontario and Quebec. For gasoline, the differentials experienced by these companies were, on average, close to the average mid-point values of the range of prices for corresponding periods in Table 2 after converting the unit of measurement from gallons to barrels. During 1966 – 1970 the average mid-point value was 95.9¢ per barrel, which compares to Shell's average

Table VI-2

Imperial Oil Dealer Tankwagon Price and Dealer Margin for Regular Leaded Gasoline Montreal and Toronto, 1956-1973 (cents per gallon)

	MONTREAL		TORONTO	
Date	Dealer T/W Price	Dealer Margin	Dealer T/W Price	Dealer Margin
1956				
March	19.6	8.2		
July 10	21.1	8.5		
1957				
January 22	22.1	8.5	21.8	8.6
November 8	21.1	8.5	21.3	8.6
1958				
January	21.1	8.3		
March 31			21.3	8.2
June	21.1	8.3		
1959				
March 24	20.5	7.8	20.5	7.8
April 11	20.7	7.6	20.7	7.6
June	20.7 (18.8#)	6.5##		
July 3			12.8	5.5
			20.7 (18.8#)	6.5##
1960				
1961				
July 10	20.7 (19.8#)	6.5##	20.7 (19.3#)	7.0##
November	20.7 (19.05#)	6.25##	20.7	6.8## (18.6#)
1962				
1963				
April 6	20.4 (17.25#)	5.8##		
June			21.4 (16.8#)	6.3##
July 29	20.8 (17.9#)	6.5##	20.8 (17.9#)	6.5##
October			20.8 (18.5#)	6.5##
1964				
January	20.8 (17.5#)	6.5##		

Table VI-2—Continued

	MONTREAL		TORONTO	
Date	Dealer T/W Price	Dealer Margin	Dealer T/W Price	Dealer Margin
February 13			20.8 (18.5#)	6.5##
June 16	18.5 (17.5#)	6.5##		
June 17			19.5 (18.5#)	6.5##
1965				
April 9	18.5 (17.5#)	6.5##		
August 15			19.5	7.5
September 13			19.5	8.5
1966				
February	18.5 (16.5)*	7.5		
April			19.5	8.5
November	18.0 (16.5)*	9.5		
1967				
January	18.0 (17.0)*	8.8	19.5	8.3
July 29	18.0 (16.0)*	7.8		
September			20.3 (19.5)	9.3
1968				
March			19.5	8.3-9.3
April	18.0 (16.0)*	7.8		
May			20.3 (19.5)	8.3
1969				
	18.0 (16.5)*	7.8		
April	18.0 (16.5)*	8.3		
July			19.5	8.3
July 22			20.9	8.9
December 21			21.3	9.5
1970				
	18.0 (16.5)*	8.3	21.3	9.5

Table VI-2—Concluded

	MONTREAL		TORONTO	
Date	Dealer T/W Price	Dealer Margin	Dealer T/W Price	Dealer Margin
October	19.0 (17.3)*	8.5	21.3	10.5
1971				
January 7			22.3	9.5
April 7	22.0 (20.0)*	8.8		
August 18			21.8	10.5
1972				
February 4	22.6 (20.6)*	8.8		
March 29			21.8	10.5
1973				
January 10	23.7 (21.7)*	8.8	22.8	10.5
April 26	24.5 (23.5)*	8.8		
May 10			23.7	10.5
June 19	24.4**	8.8		
August 1	26.2	8.8		

* Temporary competitive allowance.
** 1¢/g allowance.
# Return to company when dealer is on consignment.
## Commission to dealer on consignment.

Source: Internal Imperial Oil documents.

differential of 97.7¢. During 1969-73, the average mid-point value was 57.8¢, as compared to Gulf's differential netback of 64.8¢. Thus, at least for the years 1966-73, the Toronto-Montreal differentials are close to the region-wide and province-wide experience of Shell and Gulf during the sub-periods discussed.

The differences in netbacks between Ontario (Central) and Quebec (most of Eastern) experienced by Gulf and Shell for furnace oil were much less than for gasoline. For Shell the average difference in netback for gasoline was 58.1¢ per barrel higher than for furnace oil, and in the case of Gulf it was 51.2¢ per barrel.

Prices on heavy fuel oil are not available. There is reason to doubt, however, that the characteristics of the market in which this product is sold would have allowed any differential in prices beyond the extra cost of shipping imports to Ontario as compared to Quebec.

Following the approach of the Green Book, the price differentials discussed above are all implicitly attributed to the existence of the NOP. This is very much a first approximation. Other factors might have been important and dependent solely on local and regional market characteristics, not necessarily traceable to the NOP. The price differentials that existed prior to 1961 are an illustration of the possible importance of other factors. Dealer tankwagon prices of gasoline were the same in Toronto and Montreal in spite of higher crude oil costs for the Toronto-based refiners. The price comparisons indicate that there was limited crude oil cost recovery at the beginning and at the end of the NOP. From 1966-70, there was a high percentage of cost recovery, with much more than the differential cost of crude oil represented in the price differences in some years.

From a competitive point of view, the differentials in product prices are of interest only to the extent that they persisted in exceeding the cost of moving product into the markets with higher prices. One of the estimates of transportation costs between Montreal and Toronto on the record is 25¢ per barrel,[1] which is probably on the high side and thus provides a stern test of the persistence of price differentials exceeding transportation costs. In the case of gasoline, there is little doubt of the presence of barriers which permitted the existence of persistent differentials. Although the independents were expanding and were free to ship product across the NOP line, they were not a sufficient force to bring about a narrowing of wholesale price differentials in sales to branded dealers.

In addition to the wholesale price differential, Volume II of the Green Book also focuses on the retail margins. As shown in Table 2, margins in Toronto started to diverge from those in Montreal after wholesale prices in Toronto started to firm in 1965, while in Montreal, consignment or other support programs were in effect throughout the NOP. Under support programs, dealer margins are set or are narrowly controlled. The differential in dealer margins is attributed in the Green Book to the NOP, as is the differential in wholesale prices to dealers. Wholesale prices and dealer margins are undoubtedly positively related, moving up when wholesale supplies are tight and falling when there is an abundance of supply. Wholesale prices and margins in Montreal indicate the latter condition throughout the NOP, while tightness appears to have developed in Toronto during the mid-sixties. There is no evidence that independents in Ontario did not have access to imported product. It might, in fact, be argued that the NOP created an opportunity for importers and retailers because of the differential in wholesale prices on both sides of the line. This, as noted, was not sufficient to overcome regional differences in supply of product and the forward vertical integration of refiners.

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[1] This estimate applies to crude oil, but it is the higher of the two figures used in the Green Book; the lower figure is 15¢ per barrel.

4. Other Considerations

One of the more serious allegations in the Green Book is that the refiners used the control of imports after quotas were imposed to squeeze the independents' profits by raising wholesale prices and reducing prices at retail. This allegation is discussed in Chapter XVI.

Another outcome of the NOP which is asserted by the Director to have had a negative effect on competition is the acquisition by the majors of independent refiners in Ontario. The independent refiners were forced to sell, according to the Green Book, because they were caught in a profit squeeze created by high prices for domestic crude oil and relatively low prices for much of the product barrel. This is conceivable, but there is no analysis of the acquisitions and profit data are spotty. Whether or not there was pressure to sell, the NOP did create a small pool of buyers. The division of geographic markets led to a need for additional capacity west of the NOP line for refiners who had relied, in whole or in part, on capacity in Montreal to serve Ontario.

5. Summary and Conclusions

1. The Green Book alleges that the majors took advantage of a government policy which they had preferred to the principal policy alternative, a pipeline to Montreal, in order to insulate the area west of the NOP line from international competitive forces. The majors deny that they had a real choice. The use of government persuasion, rather than legislation, always leaves some doubt, since the levers available to the Government and the reasons why firms accede to government requests can rarely be known with confidence. There can be no doubt, however, about what government policy was. It was, moreover, a policy of long standing.

2. The allegation that the oil companies took advantage of the NOP to raise crude oil prices and to pass them on is at variance with the fact that higher-than-international-level crude oil prices for domestic crude oil were an inescapable outcome of the NOP. The goal of the NOP — an increase in crude oil output, partly through increased exports to the

U.S. — made it necessary for Canadian crude oil prices to be closely aligned with those in the U.S. In the context of the protectionist policy of the U.S. at the time, higher rather than lower prices were required to safeguard continued access of Canadian exports to the U.S.

3. The principal negative effects of the NOP were that Ontario consumers west of the NOP line paid higher product prices than consumers east of the line, and that imported gasoline was made subject to mandatory quotas beginning in 1970. Although the introduction of quotas may have had only a limited effect on product prices after 1971 due to rising international prices of crude oil and petroleum products, this policy did make independent marketers dependent on domestic refiners. This control of product imports based on a policy of protectionism, was followed by other protectionist measures, introduced in 1974, consisting of lower import compensation for petroleum products than for crude oil. This subject is discussed in Chapter XI.

4. It is outside the responsibility of this Commission to evaluate the public policy merits of the NOP, and the need to consider some of the effects of the NOP must not be taken to imply that any such evaluation has taken place. In fact, the principal goal of the NOP, a reduction in excess crude oil production capacity, was achieved, due in part to large increases in crude oil exports to the United States. Even at a purely economic level, a much wider model would be required for a public policy assessment of the NOP, one which took into account regional economic development questions as well as the distribution of economic rents created by the NOP. Furthermore, any evaluation would also have to set out and analyze the feasible alternative policies.

5. For all these reasons, the Commission must reject the allegation that practices of the major oil companies during the NOP period resulted in overcharges to the consumer based on a manipulation of the NOP, as claimed in the Green Book. However, the protectionist bent of some federal government actions, as discussed in Chapter XI, has relevance for the situation today and the Conclusions of the Report deal with our advice to the Government in this area in today's context.

VII

Imported Crude Oil and Refined Petroleum Products, 1958-1973

1. Introduction

Another allegation regarding excessive costs incurred by petroleum companies relates to the purchase of foreign crude oil and shipping services by Canadian subsidiaries from their foreign parents. The relevance of this allegation in an inquiry into monopolistic conditions, in the absence of a demonstration of a pass-on of the alleged higher costs, has been questioned in the representations of the petroleum companies.

The Director had added another element to the question, asserting that any overpayment to foreign parents would tend to have a negative impact on investment spending by the subsidiary as the result of the transfer of profits abroad. This argument recognizes that all or some of the alleged excess costs were not passed on. It applies to firms with minority shareholders where management hesitated to invest in additional refinery facilities which would not yield an adequate rate of return to minority shareholders.

The effects of reduced investments would be increased product imports or expansion by refiners who were not overpaying for crude oil or who did not have minority shareholders. An allied argument in the Green Book is that overpayments for crude oil would cause firms with minority shareholders to compete less vigorously in markets yielding a lower return, such as in sales to industrial and commercial customers and to independents.

The evidence before the Commission related almost exclusively to crude oil, with only spotty references to shipping services. The discussion in this chapter is focused, accordingly, on the comparison of crude oil prices.

The Director also alleged in the Green Book that the Canadian companies and their parents had "harmonized" the prices of imported crude oil. Although certain documents show that there were some conversations about prices, there is no evidence of agreements or harmonization. While being anxious to learn from their competitors about the prices paid by others, companies were not generally forthcoming about the prices that they themselves paid.

2. The Pass-on Question and Other Effects

Setting aside certain limiting cases, the higher costs of an input (even an essential one such as crude oil) will *not* be passed on in total to consumers. A complete pass-on is most likely to occur in a highly competitive industry, but only in the long run and only if the increase is general throughout the industry. The latter condition will be satisfied when there is a change in the environment facing the industry such as occurs with a change in tax. Higher costs resulting from inefficiency in buying or in operating may not be passed on even in part. To try to determine in any actual market situation to what extent, if any, higher costs are passed on requires exhaustive and potentially inconclusive analysis. In a complex industry such as petroleum, the task is particularly difficult since there was no evidence systematically presented that this occurred.

An analysis of the extent to which the alleged higher costs were passed on was not undertaken by the Director. His position in the Green Book is that the subsidiaries with minority shareholders were under pressure to pass on higher costs in order to protect these shareholders. While it may be the case that unsatisfactory profit levels cause firms to try to raise prices, the argument suggests that prices were being determined by costs, without any attention being given to market constraints and opportunities. Assuming that firms were already exploiting available opportunities, their ability to pass on higher costs would be limited.

The oil companies have argued that, even in the event that higher costs were incurred, they could not have been passed on because the markets were competitive. To be valid, this argument requires that an attempt by any of the majors to pass on higher crude oil costs would result in an appreciable loss of market share, either because the other majors would not follow or, even if they did, because other firms who were capable of rapidly increasing their market share would not do so.

In considering the potential passing on of higher crude oil costs, it is critical to bear in mind that the potential to do so varied by product market. Although there was limited evidence regarding heavy fuel oil, it is clear from the market characteristics of this product that the laid-down costs of imports would be a critical determinant of domestic prices. The buyers were (and are) large and well-informed, and either directly or through terminal operators would have had access to imported products. In a market such as heating oil where independents held fairly large market shares there would also have been considerable pressure from imports on refiners' wholesale prices. However, there would have been less pressure from imports in the case of gasoline because the shares held by independents were small and several of the larger independents had long-term contracts.

There were substantial imports of all products during the 1960s and early 1970s. As seen in Table XI-1 the level of imports grew very rapidly, reaching its height during 1969. In that year, heavy fuel oil accounted for 49.0 per cent of imports, followed by 28.0 per cent for middle distillates and 6.4 per cent for motor gasoline, which leaves 16.6 per cent for all other products. In arriving at an estimate of the relative importance of product imports in Eastern Canada it is necessary to recognize that there was leakage across the NOP line. In addition, it is impossible to identify from official statistics what proportion of imports and movements of products from Quebec to Ontario were to the east of the line. Treating Quebec and the Atlantic Provinces as a unit, imports accounted for 43.6 per cent of net sales of heavy fuel oil, 24.1 per cent of light fuel oil and 7.8 per cent of gasoline. To the extent that these imports were used to supply Ontario on either side of the line, the above percentages are an overestimate of the part of the Eastern markets supplied by imports.

Also, the wide price differentials that developed between the prices for retail gasoline of a number of independents and those of the majors did not lead to rapid declines in the market shares of the majors. The potentially higher prices of the majors associated with the allegedly higher costs of crude oil would be small compared to the price differentials resulting from other cost differences between the majors and the independents.

A tariff on gasoline of 1¢ per gallon ($0.35 per barrel) kept the Canadian wholesale gasoline markets somewhat separate from those in Europe and in the Caribbean. The cost difference between transporting crude oil and a "clean" product such as gasoline probably provided some additional protection to domestic refiners, but the amount is unknown. It is critical to recognize, however, that while these barriers to imported products existed, they probably did not appreciably change during the 1960s. (The tariff did not change and any changes in the transport cost differential which might have occurred would have amounted to no more than pennies per barrel.) Thus, the domestic refiners would have already had the advantage of these barriers during the period when the evidence shows that there were relatively small differences between the prices paid by subsidiaries and third-party prices. When the differences widened, there was no additional protection which would permit them to pass on higher costs. They could only attempt to do so at some risk to market share.

No evidence of a pass-on was presented by the Director, although he had indicated at several points during the Commission's hearings that this evidence would be forthcoming.

A general pass-on in all markets was highly unlikely. Even in a market such as retail gasoline, only a limited pass-on was possible if domestic refiners had already taken advantage of market opportunities before they began paying more than third-party prices for crude oil. This conclusion, based on general analytical principles, is offset to some extent by the evidence of price differences east and west of the NOP, which indicates that higher crude oil prices were reflected in gasoline prices and, to a lesser extent, in light heating fuel prices. This occurred in spite of the fact that there was no legal barrier to the movement of product. Firms such as Petrofina are known to have moved product across the line, and the independent marketer Caloil is also known to have sold large quantities of imported product to Ontario independents.

Whatever the amount of any reasonable estimate of differences between third-party prices and those paid by Canadian subsidiaries with minority shareholders, the evidence does not allow conclusions about the precise effect of these differences on product prices.

What of the other effects alleged by the Director in the event that crude oil prices were not passed on? The first, whether or not firms became less competitive in certain markets is virtually unanswerable at this date. With respect to the second alleged effect, the large volumes of product imports, primarily heavy fuel oil but also middle distillates, does raise a question about the level of investment in refining. Imperial submitted that heavy fuel oil was a by-product, and that the prevailing price differential between crude oil and heavy fuel oil made it unprofitable to expand its production without a ready market for the other products that would be produced. However, neither the Director nor Imperial introduced evidence to permit a proper assessment of this proposition.

The effects of any overpayments for imported crude oil would have differed depending on the ownership of the subsidiary. One would expect that subsidiaries without minority shareholders would not have changed any of their decisions respecting prices, investment or other variables because management would distinguish between the transfer price that was being used for tax purposes and what the crude oil could fetch on the open market.

It is the latter value that would be used in any economic decision-making. This is clearly illustrated in a document dealing with investment by Suncor Inc. (formerly Sun Oil Company Limited), then a wholly owned subsidiary of Sun Company, Inc.

The transfer prices paid would also have been neutral with respect to prices and output when a number of Canadian subsidiaries set up offshore subsidiaries of their own. Under Canadian tax law, profits earned by foreign subsidiaries of Canadian companies could be transferred into Canada without attracting any Canadian tax. As in the case of subsidiaries wholly-owned by foreign parents, the relevant economic variable for decision-making would be the cost of the crude oil to the trading company rather than the price at which it was transferred into Canada.

Another element in decision-making with respect to prices and quantities would be the tax savings enjoyed by using an offshore trader. As long as the companies were certain that the tax savings would be allowed to stand, the effective after-tax cost of crude oil would be the price paid by the trader less any tax savings enjoyed as a result of the transfer of tax-free dividends. Thus one effect of the Canadian tax regime could be an increased level of investment in downstream activities by Canadian companies with offshore traders.

The question of "excessive" payments for imported crude oil goes beyond purely a tax matter (and the public and its authorities having accurate information on which to base policy) only when there is a minority ownership and the management of the subsidiary seeks to safeguard the interests of this ownership segment. One possible national benefit of having partial Canadian ownership is that the interests of the subsidiary, and thus of the country, would be given more weight *vis-à-vis* the broad global interests of the parent than in the case of a wholly-owned subsidiary. However, the outcome very much depends on the points where the interests of the subsidiary and the parent are paramount. Canadian executives, the documents show, frequently bargained hard with their parents in an effort to win price concessions, and there are a number of references in their internal memoranda to the need to obtain favorable prices in order to safeguard the interests of minority shareholders. If, as in the case of crude oil, the management of the subsidiary does not succeed in bringing the price of crude oil down to third-party levels, then not only is there a tax loss to the country, but the level of economic activity and prices may be adversely affected as well if the interests of minority shareholders are considered once higher-than-third-party prices are paid.

The prices paid by Canadian subsidiaries for crude oil would not normally be the subject matter of a section 47 inquiry. It is, however, one of the contentious points raised in the Green Book and the Commission owes it to the parties and to the public to clear the matter up as best it can. While the certain effects of any overpayments for crude oil would have been on taxes and on the information used by government officials, it is also possible that there were higher prices charged for some products and reduced investment by the oil companies.

3. The International and Domestic Environment

Before examining prices paid by Canadian subsidiaries for imported crude oil, several characteristics of the international and domestic environment should be recognized.

The largest multinational petroleum companies — Exxon, Mobil, Texaco, Standard Oil of California, Gulf, British Petroleum and Shell slipped in relative importance as suppliers through the 1960s and 1970s. In the 1970s, they were supplanted by the crude-oil-producing countries themselves, as well as being displaced by other petroleum companies.

The challenge to the largest integrated companies in the 1960s came from other private, integrated companies and from government-owned companies in Europe and South America. The source of their strength was the discovery of new sources of supply outside of the areas where the largest integrated companies held the greatest part of crude oil reserves. To Venezuela, Iran, Iraq and Saudi Arabia were added a number of entrants in North Africa, the Gulf States and the Far East. Libya was a particularly important new entrant since development of its fields was largely undertaken by integrated firms which had not held large reserves outside the U.S. before. These firms were not integrated outside the U.S. and were limited by U.S. quotas with respect to the amounts that they could import into the U.S. As a result, the crude oil produced by these companies tended to move outside of integrated channels. Libya was also well placed to supply European markets. The new sources of crude oil supply and the growing number of corporate participants increased competition and led to declining world prices. Added to these forces was pressure from established crude oil-producing countries on the companies holding concessions in their territories to increase production, so that the royalty and tax revenues to these countries might be increased.

Crude oil still moved, nevertheless, predominantly within integrated companies. There are authoritative estimates that this was so for 80 per cent of international crude oil supplies at the end of the sixties.

The Eastern Canadian market which was open to imported crude oil was surrounded by protected and high-priced markets. The quota system in the U.S. effectively cut off the U.S. from the international competitive pressures in both crude oil and petroleum products. While some product moved across the NOP line and probably imposed some price discipline, significant price differences did develop for gasoline and, to a lesser extent, for heating oil. It can be argued that the location of Quebec markets in particular, with much of the population in close proximity to the higher priced product markets in the U.S. and Ontario, would have removed a source of political and market pressure for lower prices.

It might be argued that these factors could have led to higher product prices than those which prevailed in other parts of the world. In turn, this might have led to less pressure by buyers on their suppliers of crude oil to reduce prices. Thus the level of crude oil prices, under this line of reasoning, would in part be caused by product prices. In effect, there would be a reverse pass-on. As the evidence on prices paid for crude oil discussed later shows, if this was a factor, it did not apply to third-party transactions. A variation of this argument that relates to the particular circumstances of Eastern Canada, and to North America more generally, is that the prices of crude oil varied by market, with a tendency towards higher prices in more protected markets. Thus North America would have higher prices than Europe because of government-erected barriers to foreign crude oils.

There was also some pressure by the U.S. Government, for political reasons, to ensure that imports into Canada from Venezuela were maintained. Venezuela itself and the firms with a strong interest in that country would have sought to preserve or increase the level of output in that country. It also appears that Venezuela exerted pressure on the operating companies not to reduce prices, which would have been important as long as transaction prices corresponded to posted prices, the latter being used to determine taxes owed to the Venezuelan Government.

The two goals of the Venezuelan Government — increasing output and maintaining prices — were in conflict. They could only be reconciled by an effective policy of price discrimination on the part of suppliers of crude oil — i.e., varying the price by market, depending on the competition created by available substitutes. This would have required that sales be made CIF, or that some control be exercised over the resale of crude oil purchased on an FOB basis. Otherwise there would be nothing to prevent buyers who obtained low prices from reselling the product into higher priced markets. Information on term third-party sales provides examples of both FOB and CIF prices. However, information on both types of sales is not available for Venezuela. This question is pursued further when the evidence on the pricing of crude oil is considered.

The most important background element in the prices paid for crude oil by Canadian subsidiaries was the U.S. and Canadian tax laws. As explained below, it was to the advantage of U.S.-based multinationals to charge their subsidiaries in all parts of the world as high a price as possible since taxes paid on profits earned on sales of crude oil produced in foreign countries could be credited against U.S. tax liabilities.

4. Sourcing Profits and U.S. Tax Credits

Throughout the producing countries in the early post-war years, the producing companies were under pressure to increase their payments to the host governments. The concession system by its very nature could not satisfy the desire of producing-country governments for more influence over the rate at which their crude oil was produced or over other decisions concerning the exploitation of their resources. (As the pressure for greater control grew through the 1960s, the prospects for concessions surviving until the end of their contract-life grew dimmer.)

For a period of time in the 1950s and 1960s, the increasing demands of host governments for more revenue from their crude oil was satisfied in part through a complicated interplay of the taxation systems of consuming and producing countries.

The taxation policies in producing and consuming countries, and particularly those of the United States, provided incentives for the international or multinational companies to establish intricate networks of companies and different pricing structures so as to minimize their global tax liabilities.

Upon the recommendation of the National Security Council, the U.S. Treasury made the decision in late 1950 to permit Aramco to treat royalties paid to Saudi Arabia as though they were income taxes paid to the Government of Saudi Arabia. The effect was dramatic. Instead of deducting these royalties as regular business expenses in determining the net profit, Aramco was permitted to credit these royalties directly against any tax otherwise due to the Government of the United States. If payments made to Saudi Arabia and other producer governments had simply been regarded as a cost of business (as would be the case with a royalty), there would have been a significant reduction in per-barrel profits for the concessionnaire as market prices declined. Under provisions of United States revenue laws since 1918, taxes paid abroad were treated differently from expenses. Subject to certain limitations that changed somewhat over the years, taxes paid abroad could be credited directly against United States taxes. The rationale was to prevent double taxation of the international income of United States major oil companies. The result was to transfer tax dollars from the U.S. Treasury to producing-country governments and to the integrated petroleum companies.

Increased tax payments to host governments could be made at little cost to a United-States-based multinational company since the foreign tax increase was almost equally matched by a tax credit in the home country (any difference came from a difference in tax rates). In effect, tax revenue was simply shifted from the United States Treasury, or from the tax collecting authority in other consuming countries, to that of the host government. As long as market prices approximated the posted prices on which tax payments abroad were based, this had little effect on the behavior of the petroleum companies. However, as the price at which crude oil was sold began to fall below the posted price, the companies began to experience reduced per-barrel profits, although total income continued to increase because of expanding sales. The credits for taxes paid abroad soon began to exceed United States tax liabilities. These excess tax credits totalled about $120 million in 1962 and reached nearly $800 million in 1969.[1]

A multinational company seeks to maximize profits worldwide, subject to constraints imposed by countries in which it operates and to the requirement that foreign subsidiaries remain viable. Given this overall organizational strategy, a critical consideration in transfer pricing for multinational petroleum companies arose from the interaction between the growing need to share crude oil revenues with host governments and the opportunities provided for United-States-based companies by the United States tax laws.

The large difference between posted prices and production costs resulted in large profits on crude oil from the Middle East. Most of these "profits" were imputed since little crude oil was sold to third parties. In Aramco's case Saudi Arabia levied a 50 per cent income tax on these profits. Aramco was subject to American income taxes, but under U.S. law taxes imposed by foreign governments could be deducted from a company's U.S. tax liability on foreign income. Hence, the effect of the so-called 50/50 arrangement in the Middle East was simply to transfer Aramco's tax payments from the U.S. Treasury to Saudi Arabia, so long as the payments could be defined as income taxes. Moreover, the U.S. tax laws provided a subsidy for crude oil production in the form of a depletion allowance against taxable income. It therefore paid integrated U.S. oil companies to put as much of their integrated profit as possible at the crude oil level (or at least, in the case of foreign production, up to the limit of the tax credits obtainable).

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[1] The five U.S. majors alone claimed $18 billion in foreign tax credits in 1977. In November 1980, the Treasury Department finally proposed new internal revenue service regulations changing the foreign tax credit.

These developments created a strong economic incentive for the U.S.-based multinational oil companies to attribute as much income as possible to the countries where crude oil was produced since, in effect, the marginal tax rate on income earned there was zero. For example, if a United States based multinational increased income from its operation in Saudi Arabia by applying a higher transfer price to crude oil shipped to Canada, the taxes attributable to this extra income were covered by credits already earned. If instead the company chose to apply the lower (third-party) price and was able to make up the difference in income in the Canadian market, it would have to pay Canadian tax on that income. Thus, the multinationals' profits were higher if as much income as possible could be claimed in the producing nations (or, as later developed, in special tax-haven subsidiaries) rather than in the consuming nations, where net income to be included in the ultimate profit calculation was reduced by the imposition of additional taxes.

The U.S. tax laws unequivocally applied to the parents of Imperial, Texaco, Gulf and Sun. Of these, only Sun did not have minority shareholders. The precise tax situation of British Petroleum and Shell is not known. BP Canada was a wholly-owned subsidiary of its U.K.-based parent company until 1970, and Shell Canada, an affiliate of the Royal Dutch/Shell Group in the U.K. and the Netherlands, had Canadian minority shareholders during the period in question. Both companies told the Commission that they did not enjoy the benefits or incentives under U.K. tax laws that existed under the U.S. tax regimes.

A provision in Canadian tax laws also created an incentive for prices of crude oil imported into Canada to be higher than would have occurred in third-party transactions. As noted earlier, dividends of foreign subsidiaries of Canadian companies could enter Canada free of corporate taxes.

Petrofina Canada established an offshore subsidiary, Pannac, in 1959. Crude oil and shipping services supplied to Petrofina Canada were channeled through Pannac. The evidence is that Pannac's earnings and its dividends to Petrofina Canada were intended to reflect the markup or profit that Petrofina S.A. realized on the crude oil used by its Canadian subsidiary.

Ultramar Canada Inc. (then Golden Eagle Canada Limited) purchased its crude oil through a wholly-owned subsidiary, Ultramar Liberia Ltd., from 1966 through 1974. Murphy Oil Quebec Limited (renamed Spur Oil Ltd. in 1976) had a wholly-owned subsidiary, Tepwin Company Limited, from 1970 through 1975. Irving Oil Limited started acquiring crude oil through Irvcal, a Bermuda company, in 1971. Imperial Oil had during 1968 to 1973 channeled its purchases through its wholly-owned subsidiary, Albury

Company Limited. It made its purchases of ocean shipping services through Caribbean and Transport Incorporated (in Panama) from 1955 to 1963, and through the Western Oil and Trading Company Limited (in the Bahamas) from 1964 to 1973. On the other hand, Gulf, Shell and Texaco did not establish such offshore crude oil trading companies.

The incentive created by Canadian tax law was for the transfer price from the offshore trader to be as high as that allowed by the Canadian tax authorities. Any resulting profits accruing to the wholly owned offshore trader could then be remitted into Canada as dividends without drawing any Canadian tax, thus effectively reducing the after-tax costs of imported crude oil. If, instead, the Canadian subsidiary had purchased from its foreign parent at the third-party cost of crude oil, this would have increased refining profits and taxes in Canada. Thus, even in cases where companies operating in Canada had foreign parents who were buying crude oil at third-party prices, there was an incentive to take advantage of available tax laws to create markups over third-party transactions, so far as this was consistent with obligations to minority shareholders. The same incentive, it should be added, would be present in the case of a wholly-owned Canadian company; it too would have had an incentive to establish an offshore trader. There is evidence that Canadian Oil Companies, a refiner and marketer in Ontario and Alberta acquired by Shell in 1963, had had an offshore trader.

Tax avoidance, like taxes, will always be with us. What encouraged it and made it possible was the fact that it was very difficult for tax departments to acquire information about the level of prices in comparable arm's-length transactions in the petroleum industry. As discussed above, none of the Canadian companies was importing crude oil at arm's length, whether or not the foreign parents were producing or buying the crude oil shipped to Canada. Internationally, about 80 per cent of crude oil moved within integrated channels towards the end of the 1960s. The percentage would have been higher in earlier years. Although there was some reporting of prices in third-party transactions for some Middle Eastern crude oils, similar information for Venezuelan crude oils was very scarce.

Nevertheless, the prices paid by Canadian companies were available to tax officials. As shown in the next section, a wide range of prices was paid by various buyers and they raise certain questions, such as why any parent would charge less to its subsidiary than the price it could obtain by selling outside its organization. Were low prices paid by a company such as BP Canada not available to other customers or would-be customers of its parent, and how can much higher prices than those paid by BP Canada be explained? Thus, a number of crude oils purchased by several companies might have provided some information with which to evaluate prices. In

1967, based on the information concerning the 1961 to 1965 period available to it at the time, the Department of National Revenue established the posted price less 12 per cent as a single fair market value standard for transfer prices for all crude oils. This was apparently based on the average of discounts available to Imperial Oil in 1961.

The posted price was the price that large purchasers announced, or "posted", as the price that they were willing to pay for particular crude oils. Until soft market conditions developed in the late 1950s, posted prices probably reflected actual transaction prices. When discounting off posted prices started to develop, producing countries froze these prices because royalty and tax payments were based on them. The posted prices became, in effect, tax-reference prices. Transaction prices in third-party, and to a lesser extent in integrated company sales, however, followed their own course, based on the dynamics of changing market circumstances and pressures by consumer government tax authorities for more realistic prices.

The Department of National Revenue also looked into the operation of offshore trading companies. The key issue here, apparently, was whether these companies were performing a legitimate function or were set up as a means of avoiding taxes. Several tax reassessments and court cases, where the companies did not agree with the reassessments, resulted from the standard of posted price less 12 per cent and from the Department's challenge to some of the offshore traders. None of the largest integrated companies was involved in any appreciable reassessments.

5. Information Relied On in Price Comparisons

Purchases of imported crude oil by Canadian companies were, except in unusual cases, routinely made from their parents and majority shareholders. The documentary evidence strongly indicates that the Canadian companies would not have been permitted to buy outside of affiliated channels. Based on general experience, it would be surprising if this were not so. Several companies denied, however, that they were constrained from buying outside their own organizations. Executives testified that they were free to buy elsewhere, but that they believed they could not have done any better, in the long run, by doing so.

The central question raised by the Green Book with respect to imported crude oil is whether the prices paid by Canadian companies were above those that would have been paid if purchases had been on a third-party basis.[2] Since this involves a hypothetical question, the answer must be sought in actual transactions which may be considered as equivalent. The standard used in evaluating non-arm's length transactions for tax purposes is the concept of "fair market value". Third-party or arm's length transactions are looked to in providing empirical content to this concept. Given the differences entailed in various transactions, there is no single set of transactions that can be used as a "fair market value" standard or as a third-party or "arm's length transactions" standard. Rather, there is an amalgam of information which can be weighed only through a difficult judgemental process.

Several sources of information are available for evaluating the level of prices paid by Canadian subsidiaries for imported crude oil. These are described in Appendix E. The information from all save one of these sources is presented in the tables which form Appendix F.

The first source of information is documents from the files of the petroleum companies. These contain the views of executives in Sun, Imperial Oil, Texaco and Gulf with regard to the prices they were paying for crude oil. Although the language and the examples differ, there is a consistency of view that the prices being paid to their supplying affiliates were higher than those available elsewhere. The petroleum companies have argued that the documents merely indicated that the views expressed had been used in negotiations with the supplying companies. This interpretation might be put on some of the documents in question but it does not apply to others.

The most explicit information regarding a comparison of the prices paid by a subsidiary and other prices was taken up in Sun Canada planning documents. The point of comparison was the price that Sun's parent organization could obtain for sales of Venezuelan Lagomedio crude oil into Europe and to other countries in South America, as well as the market price information available on Lagomar crude oil which it obtained from the Shell

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[2] A related concern arose from documentary evidence which implied that the crude oils purchased from their parents were sometimes of a lower value to them than that available at the same price from a third-party source. This area was not systematically investigated; to have done so would have required a separate and highly technical inquiry. Given the limited nature of the evidence, it would be inappropriate to reach any conclusions about this factor. Nevertheless, given that there were probably constraints on shopping by subsidiaries, and that individual refinery design and desired product mix are important considerations in the selection of crude oils, it is a potentially important factor in the cost level of refineries. It is, however, an area that effectively lies outside of policy intervention. As in other areas involving efficiency of operation, the required information is very difficult to obtain and virtually precludes the intervention of the tax department or of minority shareholders.

Group in Venezuela. Sales on a third-party basis were particularly important to the Sun organization since only a relatively small part (approximately 20 per cent) of Sun's Venezuelan output of Lagomedio could be disposed of through affiliates. Sales outside of the organization were referred to as "alternate values" — i.e., alternate to what the parent would obtain on crude oil sales other than to its Canadian subsidiary. Those alternate values, rather than actual transfer prices, were employed in Sun Canada investment planning documents.

The weight to be placed on this information depends on whether, and to what extent, there was geographical price discrimination as discussed above. Apart from possible arbitrage by customers, why would Sun have accepted lower prices from customers in Germany and Brazil than it could have obtained from customers in North America? Although the Venezuelan Government was concerned about the discounting of its crude oil in markets where it was traditionally strong, it is difficult to believe that any company would have foregone the opportunity to obtain higher prices. Sun was forced into markets where it had to accept low prices because these were the only markets available to it. If Canadian subsidiaries of other multinationals had been free to buy from Sun, it would have been in Sun's interest to sell at any price above what it was receiving from customers elsewhere.

The Sun alternate values are included in Appendix F tables as one of a number of third-party standards. This was done not only because of the above considerations but also because the level of alternate values is consistent with the known or estimated third-party prices paid by the parents of Ultramar, Petrofina and Murphy for Venezuelan crude oil to be used in Eastern Canada. Another set of third-party prices consisting of all available market price information found in Sun documents (and supplemented by Esso International data described below) was also shown in Appendix F tables in the form of a price range.

The information in the documents of the other companies is far less explicit, although specific prices are referred to. The fact that Sun Canada was a wholly-owned subsidiary (and that the Sun Group was much smaller than the other companies) probably accounts for the fact that the information available to its executives in Canada was much better than it was to executives in the other subsidiaries. Yet the views of the Sun Canada executives must be given considerable weight. The price paid for crude oil was a critical determinant of the financial performance of the Canadian companies for which they worked, and they thus had a strong interest in obtaining information about third-party prices. They would also have had information on product prices internationally, which would have permited them, as persons experienced in the industry, to estimate the crude oil values that underlay them.

The existence of offshore traders is by itself an indication that prices of interaffiliate transactions within the integrated petroleum companies were relatively high. The setting up of these entities through which crude oil and shipping services were purchased, suggests that there was a wedge between third-party and interaffiliate transactions that could be exploited. In most cases the prices paid by or on behalf of the offshore trader are known. In the case of Petrofina, third-party prices have been calculated by subtracting the offshore trader's dividends or net income per barrel from the transfer price between the offshore trader and its parent Canadian company. Given that these are the actual or best estimates of prices paid for crude oil used by companies in Canada, they are the most reliable measures of what Canadian subsidiaries would have had to pay if they had been free to shop for supplies outside their own companies.

The actual prices paid by Petrofina S.A. are not known. There appeared to be considerable speculation in the industry that Petrofina S.A. was obtaining its crude oil at very favorable prices. There is no way, however, of estimating these prices with any assurance. The only specific information was contained in a 1963 memorandum on Lagomedio crude oil purchases prepared by a Gulf executive after a conversation with a Petrofina Canada executive. The key points from the viewpoint of estimating third-party prices are: the prices paid by the offshore trader for Lagomedio were not third-party prices, they were higher; profits were generated by other activities of the trader which permitted the trader to earn a net profit; the level of dividends remitted from the trader to Petrofina Canada was designed to recompense Petrofina for the difference between the transfer price it was charged for Lagomedio and the actual third-party price. The last element means that the third-party price for Lagomedio can be calculated by subtracting the dividends received from the transfer price to obtain Petrofina S.A.'s third-party price.

This procedure is feasible for the period 1962-1968, and provides an estimate for Lagomedio, a Venezuelan crude oil. The mix of crude oils imported by Petrofina Canada during other years is too diverse for the dividend per barrel to be tied to prices for any particular crude oils. The estimated third-party FOB prices which Petrofina S.A. paid for Lagomedio are much closer (although still higher) to the prices received by Sun Venezuela than the prices paid by the major refiners to their affiliated companies. They are also close to the known prices for Lagomedio paid by Ultramar's offshore trader during three years and to the price paid by Murphy in another year.

Although Imperial Oil was not always well informed about its competitors' crude oil costs, its estimates of Petrofina's costs for the years 1967-70 are very close to the estimates of Petrofina's FOB costs for Lagomedio yielded by subtracting the dividend it received from Pannac. Imperial Oil's estimate in 1968 for prices in 1967 and 1968 was based on information that it had received from Exxon on that company's losing bid to Petrofina S.A.; the winning bid had to be somewhat lower. The bid in question was for Venezuelan Tia Juana Medium, not Lagomedio, but, using the prevalent adjustment of 2¢ per degree of API, Imperial Oil was able to draw information about Petrofina S.A.'s cost of Lagomedio. Nevertheless, over the full period, the estimated Petrofina S.A. costs of Lagomedio merit much less confidence than the other third-party standards because of the range of activities engaged in by the offshore trader.

Sun's alternate value is based on actual transaction prices. In the case of Venezuelan Tia Juana Medium crude oil, the prices paid by Ultramar are based on contracts, as are Murphy's prices paid for Iranian Light and for Venezuelan Light crude oils.

Ultramar and Murphy had purchased their crude oil under long-term contracts. The length of the contracts entered into by Petrofina S.A. are not known, but there is no reason to believe that it too was not supplied under long-term contracts. The most relevant price comparison might appear to be that in the year in which the contract is entered into because it reflects the then current information, whereas subsequent years in the contract yield prices which are based on predictions, when the contract was signed, about future market forces. On the other hand, if prices paid in parent-subsidiary transactions are to be compared with examples of third-party transactions then the experience throughout the relevant period should be used. This is what has been done in Appendix F and in the summary comparison tables which follow.

Another set of third-party prices is that charged by Esso International (Exxon) or Creole, the producing arm of Exxon in Venezuela. This information was entered by Imperial Oil as evidence in defense of the prices it had paid to its parent. Transactions covering a number of types of crude oil are included in this price information, but only in the case of Venezuelan Medium are there sufficient transactions to form a reasonable basis for comparison. The contracts underlying the transactions were not available. Both spot and term transactions of unknown duration are included. The Commission was uncertain as to how much weight should be attached to the price information as originally tendered because it could not be sure just what types of transactions this represented. In particular, the Commission was concerned that there were tax advantages to firms who were both buyers and sellers to pay high prices if they knew that they would, in turn, receive high prices. This would accomplish the transfer of profits to producing countries. Under such circumstances, a third-party transaction price is not a free-market price. This concern led the Commission to ask Imperial Oil to break down the transactions into categories where the buyer was known to have crude oil reserves of its own and where it did not have these reserves. (Included in the latter group in the breakdown subsequently provided were firms which may have had limited crude oil reserves.)

The Director in final argument urged that no weight be given to the grouped Exxon data since it was self-serving evidence that could not be tested during cross-examination without the contracts. The Commission is of the view that the transactions involving Venezuelan Medium crude oil do carry some weight.

Reported prices in the trade press represent another source of available information. Included here are both third-party term prices and spot prices which were gathered by researchers into the industry, in particular Professor M.A. Adelman and Mr. W.L. Newton. Term third-party prices have been relied on for the comparisons which follow. While spot prices are a good indicator of current market forces at any time, it is doubtful that refiners would have wanted to rely primarily on spot purchases to meet their needs. Above all, term contracts come closer to representing the continuing parent-subsidiary relationship.

The final set of information relates to available estimates on the costs of production of companies in different parts of the world. Included in these costs are payments to the producing countries by way of royalties, corporate income taxes and costs of production, both including and excluding a return on invested capital. This information on tax-paid costs and competitive supply prices is not of direct concern. It serves as a rough test as to whether the available third-party price information is credible in relation to costs. Third-party prices are generally well above these estimated costs except for the estimated prices paid for Middle East crude oils by Petrofina in the early 1970s and by Irving's offshore trader from 1972 through 1975.

The prices paid by Irving Refining Limited have not been included in the summary tables in this chapter although its prices and buying arrangements, like those of other importers of crude oil, are discussed in some detail in Appendix E. The reason for this is that it is very difficult, without having more information, to categorize its relationship with the seller, Standard Oil Company of California (SOCAL), which initially held a 51 per cent interest in Irving Refining Limited and a 49 per cent interest in Irving Oil Company, Limited (the marketing and distribution organization for the Irving group). The distribution of shares suggests that only a partner-like working environment would function in the long run, regardless of the legal form of the relationship. Based strictly on the ownership of shares, SOCAL could be said to have had control of the refining company until June 1973.

In any event, the prices paid by Irving Refining Limited during the 1960s were the highest paid by all Canadian importers. Its prices were tied to posted prices when transaction prices were falling almost continuously and were well below posted prices. The contract did contain a clause that allowed it to be terminated on one year's notice, but for some reason this clause was not used.

In 1971, Irving Refining began buying its crude oil through an offshore trader. If the earnings per barrel generated by this subsidiary are deducted from the transfer price paid by Irving Refining to the trader, a very low implicit price paid by the trader is suggested: based on available information, this was a much lower price, except for 1971, than was being paid in third-party transactions. Without confirmation from other sources that the estimation of third-party prices by subtracting the earnings or dividends of the Irving offshore trader provides reasonable results, this method was not used in the summary comparison tables which follow.

Stated price is only one part of the actual or effective price. In transactions involving international trade in crude oil, additional variables such as credit terms and currency of payment often come into play. Premiums or discounts can also be obtained or granted by selling a package of crude oils. The existence of various means of making the effective price more or less attractive means that the use of stated prices in making price comparisons can lead to error. There is no way of avoiding this difficulty unless all of the terms of transactions are known.

Is ignorance of the complete terms of transactions likely to result in a systematic bias? It is likely that, if there is any systematic bias in the price comparisons for the 1960s and early 1970s, it tends to make the effective prices paid by Canadian subsidiaries appear to be lower than they otherwise would be in comparison with third-party prices. During a time of falling prices, which was the case throughout the 1960s, ancillary terms to third-party buyers are more likely to be used to make the stated price more attractive. On the other hand, in periods of feared scarcity when prices are escalating quickly, as occurred in 1973 and even more so in 1979, sellers may obtain concessions from buyers which make the effective price higher than the stated price. There is no evidence that Canadian subsidiaries were granted unusual credit terms or were allowed to make payments in soft currencies. If these were important factors at any time in the level of effective transaction prices, they were more likely to have favored third-party buyers.

Several of the petroleum companies have questioned the use of prices paid in third-party transactions as a standard for evaluating the prices they paid to their affiliates because they viewed their parent as providing, in a summary phrase, "security of supply." The most complete articulation of this view was provided by Mr. W.D. Archbold, a former executive of Imperial Oil. According to his evidence, one of the advantages of dealing with a parent, such as Exxon, is that it has available to it a large pool of different crude oils, several of which can be interchanged for refining purposes. In the event of disruption of supply from one geographical source, the parent is able to provide alternative supplies suited to its subsidiary's refinery needs. A second advantage noted was that Imperial Oil was, and is, allowed to vary the quantities purchased. In other words, it was not bound to strict quantities as it might be in a third-party contract. In order to enjoy these advantages of the Exxon pool, Imperial Oil understood that it had to participate fully; it could not be a partial member of the pool.

To evaluate the importance of these benefits and whether they obviate price comparisons with third-party transactions or justify the price differences observed, it is necessary to consider the perceived benefits from the viewpoint of the parent as well as that of the subsidiary. It is reasonable to believe that it will generally be in the interest of the parent to ensure supply to the subsidiary, since failure to do so could jeopardize its investment. Physical supply, however, is rarely the question, price is. Where there are minority shareholders, it is difficult to envisage circumstances where it would be in the interest of the parent to charge a lower price to its subsidiary than it could obtain in third-party transactions. Thus, unless markets are not functioning, there is no reason to believe that the supplies available through the parent will be cheaper than from other sources; that is, that higher prices paid during one period will be offset by lower prices in another. In addition, if there are advantages to the subsidiary in dealing with its parent, the obverse is also true. Most importantly, the parent has an assured customer. It is also in a position to benefit from its ability to influence the buying decisions of the subsidiary. The principal unique advantage of dealing with the parent resides in the flexibility allowed the subsidiary with respect to quantities purchased in the event of unexpected changes in refinery requirements. This does not appear to be quantitatively important in explaining other than very small price differences. In any event, it is noteworthy that a "most-favored buyer" clause was added to Imperial Oil's supply contract with Exxon in 1976, which requires that Imperial Oil pay no more than other affiliates or third-party buyers on sales of Exxon into Canada or into a contiguous area — i.e., the U.S. This goes a long way towards recognition of the view that the prices paid by subsidiaries should not exceed those paid in third-party transactions.

6. Price Comparisons

This section contains the Commission's observations and conclusions concerning the detailed price experience shown in the tables in Appendix F. The twelve tables relate to more than a dozen types and grades of crude oil. Except for certain Venezuelan crude oils for which only FOB price comparisons are available (Tables F-7 and F-12), there are two tables for each crude oil, one containing FOB prices and the other CIF prices.

It is difficult to summarize experience after 1970 because there were frequent and relatively large price changes after that year; unless prices relate to transactions occurring very close together, comparisons are often not valid.

Occasionally there are price comparisons in the text relating to 1970-1972 for which there are no counterpart comparisons in the summary tables that follow. In all these cases the material on which these comparisons are based is found in the relevant tables in Appendix F.

Term third-party prices are the third-party standard against which prices paid by subsidiaries for Arabian Light in Appendix Tables F-1 and F-2 are compared in Tables 1 (FOB prices) and 2 (CIF prices). The method of presentation used in these tables and in others, where the standard of comparison is represented by a range of prices, is to first state the size of the range and then to compare the prices paid by the subsidiaries with the top of the range. One would expect that the subsidiaries would have paid prices spread throughout the third-party ranges. Observations above the top of the range indicate that the subsidiary overpaid, based on all the known experience of buyers in third-party transactions. Where prices were below the top of the range, they were examined to see whether they tended to be spread throughout the range or were clustered at the bottom or the top of the range. Either of the first two patterns would indicate that the subsidiaries bought at prices at least as low as those paid in third-party transactions. Where transactions were all found to be in the top half of the range, this suggested that, on the whole, the subsidiary tended to pay higher prices than those paid in third-party transactions.

The interpretation of Table 1 is illustrated in the following example: Gulf's price in 1961 was $1.68 per barrel. The range of term third-party prices in that year was $1.62 to $1.66; that is, the size of the range was 4¢. Gulf's average price for the year is shown as being 2¢ above the top of the term third-party price range. If, by way of example, one wanted to compare its price with the bottom of the range, this could be done by simply adding to the previous number the size of the range, which happens to be 4¢ (i.e., $1.68 — $1.62 = $0.06).

The entries in Tables 1 and 2 have been limited to those years when a third-party price and at least one subsidiary's price are known. In the case of Gulf, only FOB prices are available, whereas Texaco bought CIF. Based on reported term third-party prices outside of Canada, Texaco, Sun and Gulf paid higher prices than the top of the range. Imperial Oil's prices were above the top of the range in 1964 and 1965, and below it in 1966 and 1967. Its CIF prices were intermittently above and below the top third-party price.

Table VII-1

Comparative FOB Prices of Imported Arabian Light
(34.0° — 34.9° API) Crude Oil, 1959-1969
(U.S. cents per barrel)

Year	Size of Term Third-Party Price Range	Amount above or (below) top of the range		
		Gulf	Imperial	Sun
1959	0*	30		
1960	26	31,21		
1961	4	2		
1962	0*	32		
1964	19		11	
1965	23		4	
1966	16		(2)	
1967	21		(8)	
1969	12			28

* Term third-party prices are represented by a single price rather than by a range of prices.

Source: Appendix Table F-1.

The CIF prices of the Canadian subsidiaries not only fell below the top of the range in the second halves of 1967, 1970 and 1971, but they also were near or below the bottom of the range. Since the FOB price relationships did not substantially change (except for Sun in the second half of 1971), the change in CIF price relationships was primarily due to the more favorable transportation costs enjoyed by Canadian subsidiaries at these times.

Four sets of third-party price observations are available from Appendix Tables F-3 and F-4 for comparing the prices of Iranian Light: Murphy's contracted FOB and CIF prices with BP Trading Co., its FOB prices with Esso International, its offshore prices for shipping services and crude oil and other term third-party prices. For 1965 through 1968, there were three out of the four years when the FOB prices paid by Gulf can be compared with the BP contract prices of Murphy. Gulf's unweighted average price was approximately 11¢ higher than Murphy's. In the remaining years during which a comparison is possible, the gap increased to 16¢ in 1971 and 1972. On a CIF basis, Gulf's average unweighted price was 13¢ higher than the BP contract prices paid by Murphy for 1965 through 1969. In 1971, it ranged from 1¢ below to 1¢ above while in 1972 it was generally 5¢ below Murphy's CIF contract price. At this time, Gulf benefitted from lower transportation costs than Murphy. Texaco's average unweighted price, also CIF, was 31¢ higher than Murphy's CIF contract price in 1966 to 1969; it was still 26¢ higher after Texaco's transfer price was lowered in 1970. As shown in Tables 3 and 4, while Murphy was receiving favorable prices, they were by no means close to or below the lowest reported third-party prices.

Table VII-2

Comparative CIF Prices of Imported Arabian Light
(34.0° — 34.9° API) Crude Oil, 1959-1969
(U.S. cents per barrel)

Year	Size of Term Third-Party Price Range	Amount above or (below) top of the range		
		Texaco	Imperial	Sun
1959	0*	49,25		
1960	27	40		
1961	4	33,23		
1962	0*	56,41		
1963	31	6		
1964	20	31	15	
1965	35	6	(2)	
1966	29	18	14	
1967				
1st half	39	6	(8)	
2nd half	23	(9)	(23)	
1968	30	23		
1969	22	32		32

* Term third-party prices are represented by a single price rather than by a range of prices.

Source: Appendix Table F-2.

The prices paid by Canadian subsidiaries for Iranian Light are compared with reported FOB and CIF term third-party prices in Tables 3 and 4. Texaco generally paid more than the highest reported CIF term third-party prices — sometimes by appreciable amounts. The sole exceptions were in the second halves of 1967 and 1970 when tighter tanker freight markets resulted in increased CIF third-party prices. Subsequently in 1968 and 1969, when transportation costs fell, Texaco's CIF price exceeded the top of the third-party price range. In 1964 the single available comparison for Imperial Oil, both the FOB and CIF prices it paid were above the top of a wide third-party price range. The picture is mixed for Gulf, with observations considerably above the top of the range in 1963/1964 but below the top of a wide range in 1965 to 1968. On average, its prices were close to the highest third-party prices. For Shell, the 1962 and 1963 CIF prices it paid were considerably above and just below, respectively, the top of the range.

Table VII-3

Comparative FOB Prices of Imported Iranian Light (34.0° — 34.9° API) Crude Oil, 1960-1968 (U.S. cents per barrel)

		Amount above or (below) top of the range			
Year	Size of Term Third-Party Price Range	Gulf	Imperial	BP	Murphy (Contract Prices)
1960	13			23,12	
1961	0*			0	
1962	5			0	
1963	14	14		(9)	
1964	24	13	7	(10)	
1965	28				
1st half		(8)		(12)	
2nd half		(10)		(13)	(20)
1966	43			(8)	(15)
1967	36	(10)		(12)	
1st half					(19)
2nd half					(21)
1968	25	1		(1)	(10)

* Term third-party prices are represented by a single price rather than by a range of prices.

Source: Appendix Table F-3.

The reported prices paid by BP Canada to BP Trading were not retained in a systematic way by the Canadian company prior to 1969. As a result, the prices for the earlier period for Iranian Light were mainly obtained from the records of BP Trading, which were stated to represent price offers to all customers. In this event, the prices reported for BP Canada prior to 1969 would represent another set of third-party prices as well as prices to BP Canada. Prices paid for Iranian Light as well as other crude oils for certain years prior to 1969 were obtained from various company documents, consisting in some cases of contracts. Similar sources in other companies were also used to enlarge the available information on the prices paid by other Canadian companies.

Documentary evidence from the files of BP Canada indicates that executives of this company were satisfied with the prices they were paying. In Table 3, its prices were, with minor exceptions, consistently equal to or below the top of the third-party range.

Table VII-4

Comparative CIF Portland Prices of Imported Iranian Light (34.0° — 34.9° API) Crude Oil, 1959-1970 (U.S. cents per barrel)

Year	Size of Term Third-Party Price Range	Amount above or (below) top of the range					
		Texaco	Shell	Imperial	Gulf	BP	Murphy
1959	0*	54,30					
1960	14	43				33,23	
1961	0*	57,47				7	
1962	5	49	11			9	
1963	18		(2)		50	(11)	
1964	25			13	59	0	
1965	40				(11)	(14)	(22)
1966	56	14				(17)	(16)
1967							
1st half	54	7			5	(24)	(23)
2nd half	2	(8)			(10)	(39)	(40)
1968	48	15			(11)	16	
1st half							(16)
2nd half							(26)
1969	21	27				(10)	
1st half							(16)-(14)
2nd half							(20)-(16)
1970	14	(26)				(58)	(68)-(59)
1st half	27	8				(24)	(34)
2nd half	39	(69)				(101)	(111)-(102)

* Term third-party prices are represented by a single price rather than by a range of prices.

Source: Appendix Table F-4.

There are three sets of third-party prices available for Lagomar/Lagomedio, two similar Venezuelan crude oils. One is the set of Sun alternate values, the prices received by Sun Venezuela in at least some third-party transactions. These are FOB prices. Another set consists of a range of third-party FOB market prices based on sales of Sun Venezuela and Esso International, and from Adelman. This set also includes the Sun alternate value figures which were at the bottom of the range. The addition of term charter third-party ocean freight rates (see Appendix E) from Venezuela to Portland (plus insurance) to these two sets of FOB prices produced CIF price standards.

The third set consists of the FOB and CIF prices paid by Petrofina S.A. which are estimated prices based on the dividends received by Petrofina Canada from its offshore trader. Since the dividends may have reflected a markup for shipping services as well as for crude oil, the estimated CIF prices may be more reliable than the estimated FOB prices. If this is the case, the estimated FOB prices are understated (e.g., by 11¢ for 1966) and the actual FOB prices paid by Petrofina S.A. were somewhat closer to the prices paid by Canadian subsidiaries. The third-party prices and the transfer prices of the Canadian subsidiaries from Appendix Tables F-5 and F-6 are summarized in Tables 5 and 6.

Table VII-5

Comparative FOB Prices of Imported Lagomar/Lagomedio (32.0° — 32.9° API) Crude Oils, 1958-1970 (U.S. cents per barrel)

Year	Size of Term Third-Party Price Range	Amount above or (below) top of the range							
		Sun	Texaco	Imperial	Gulf	Shell	Petro-fina	Ultramar	Murphy
1958	0*		79						
1960	39		64	34			64		
1962	74	14	10,(5)	(20)	(15),(25)	(23)	(53)		
1963	65	23	4	(11)		(14)	(42)		
1964	94	(26)	(31)	(40)		(43)	(80),(75)		
1965	58	10	1	(4)		(7)	(43)		
1966	60	3	1	(4)		(7)	(50)	(65)	
1967	1	60	55			47,36	4	(1),(9)	
1968	10	44	39		9	20	(9)	(10),(25)	
1969	15	44	39			20	(12)		
1970	34	19		0-11		(4)	(39)		(29),(41)

* Term third-party prices are represented by a single price rather than by a range of prices.

Source: Appendix Table F-5.

The Sun and Texaco FOB and CIF prices for Lagomar/Lagomedio in Tables 5 and 6 were consistently much higher than the top of wide third-party price ranges for 1958-1960 to early 1971. Although they were both below the top in 1964, their prices were in the upper third of the widest range (i.e., 99¢) observed in the 1960s. Imperial's and Shell's prices were below the top of the range from 1960 to 1966, but they were in the top third or just below the top of wide ranges. From mid-1967 to 1969, Shell's prices were considerably above the top.

The Canadian subsidiaries' transfer prices were therefore much higher than third-party prices observed from 1960 to 1969. In contrast, Petrofina's prices from 1960 to 1966 were in the lower third or lower half of the price range. In 1967 to 1969 they were either above or slightly below the top of the range. Ultramar's prices in 1969 were near the bottom of the range. In 1970, some of the Canadian subsidiaries' transfer prices were more comparable to third-party prices, while in 1971 almost all the transfer prices were below third-party prices.

Table VII-6

Comparative CIF Portland Prices of Imported Lagomar/Lagomedio (32.0° — 32.9° API) Crude Oils, 1960-1970
(U.S. cents per barrel)

Year	Size of Term Third-Party Price Range	Amount above or (below) top of the range							
		Sun	Texaco	Imperial	Shell	Gulf	Ultramar	Petro-fina	Murphy
1960	39		101	37				74	
1962	75	9	23,8	(18)	(15)			(37)	
1963	68	13	17	(10)	(8)			(27)	
1964	99	(34)	(30)	(41)	(40)			(65),(60)	
1965	62	6	6	(4)	(2)			(28)	
1966	64	0	1	(1)	(3)			(34)	
1967									
1st half	6	68	54		(48)			15	
2nd half	5	65	51		34			12	
1968	19	51	37		20	2	(12),(20)	1	
1969	21	54	39		20			(2)	
1970	39	21	(11)	(17)-4	(14)			(38)	(35),(47)

Source: Appendix Table F-6.

A comparison of the Canadian subsidiaries' transfer prices with the Sun alternate values and the Petrofina prices is shown on Table 7 because comparisons with the wide range of the third-party prices tends to downplay the degree to which the transfer prices were above the lowest available third-party prices. Table 7 provides a comparison of price averages for 1962 to 1966 and for 1962 to 1969.

The average Sun alternate value for 1962 to 1969 was 66¢ per barrel below Sun's FOB transfer price, at one end of the scale, and 43¢ below the average FOB price paid by Shell at the other end. The differences are about 10¢ per barrel less if Petrofina S.A.'s estimated FOB price is used as a point of comparison instead of the Sun alternate value. Additional third-party prices are available for 1966 through 1968 when Ultramar made some purchases. The prices paid by its offshore trader were somewhat below the

Sun alternate values and the estimated prices paid by Petrofina S.A., indicating that the third-party transactions used as standards of comparison were not anomalies.

Gulf, whose prices are not shown in Table 7, made purchases in 1961, 1962 and 1968. For 1962 and 1968, its average FOB costs were 34.4¢ per barrel above the average Sun alternate value, and 35¢ per barrel above the estimated Petrofina S.A. prices for the three years. These differences are below those of the other Canadian subsidiaries.

Table VII-7

Comparative Average Unweighted FOB and CIF Prices of Lagomar/Lagomedio (32.0° — 32.9° API) Crude Oils, 1962-1969 (U.S. dollars per barrel)

	FOB		CIF	
	1962-66	1962-69	1962-66	1962-69
Sun	2.35	2.31	2.50	2.51
Texaco	2.26	2.23	2.53	2.48
Imperial	2.14		2.36	
Shell	2.11	2.08	2.37	2.33
Petrofina S.A.	1.76	1.74	2.13	2.08
Sun Alternate	1.62	1.65	1.80-1.83	1.82-1.86
Third-Party	1.60-2.30	1.62-2.09	1.77-2.51	1.79-2.31

Source: Appendix Tables F-5 and F-6.

The differences between the estimated CIF prices paid by Petrofina S.A. and the prices paid by Canadian subsidiaries are somewhat smaller than those discussed above, with a range of differences between 25¢ and 43¢ per barrel. The contrast is especially noticeable for Gulf, whose CIF price (for 1968) was actually 1¢ per barrel above Petrofina's price. CIF prices for Murphy in 1968 and 1970 were equal to or within 3¢ of Petrofina's prices. While there is a fairly wide range of estimated overpayments for Lagomar/Lagomedio by Canadian subsidiaries (depending on whether estimated prices paid by Petrofina S.A., on the one hand, or Sun alternate value and purchases by Ultramar's trader, on the other, are used as points of comparison) the minimum differential observed was 25¢ for average CIF prices (excluding Gulf).

The FOB prices paid for a second Venezuelan crude oil, Tia Juana Medium are compared in Table 8. A very different picture appears depending on whether Ultramar's contract prices or the Exxon third-party price range on sales to non-integrated buyers are used to represent third-party prices. The prices paid by Ultramar for crude oil imported into Canada are at the bottom of this range up to 1971 inclusive. Ultramar initially obtained Tia Juana Medium (from 1961 to early 1962) from Esso International through Canadian and Caribbean Oil Company which was set up to handle the financing by Esso of Ultramar's Holyrood, Newfoundland refinery. It subsequently entered into a contract with Esso (now Exxon) running from June 1962 through 1967, at a price of $1.93 per barrel. (Ultramar did not ship any Tia Juana Medium to Canada in 1966.) When the contract was renegotiated in 1968, it obtained a price of $1.59 per barrel which was also retroactively extended to December 1967 — shipments to Canada in 1967 were at this reduced price. In 1971, a second contract was entered into with Esso for supplies to Ultramar's new Quebec refinery at a price of $2.17 for May. Imports of Tia Juana Medium under these contracts lasted to the end of 1974.

Based on Ultramar's price, the prices paid by all subsidiaries, save BP, were very high. Based on the Exxon third-party price range, Texaco and Gulf fluctuated between being below and above the top of the range, with their prices on average approximately equal to the top. Imperial's prices were considerably below the top of the range, but almost always lay in the top half. BP's prices were, on average, around the middle of the range of third-party transactions.

Table VII-8

Comparative FOB Prices of Imported Tia Juana Medium
(26.0° — 26.9° API) Crude Oil, 1960-1969
(U.S. cents per barrel)

Year	Size of Exxon Third-Party Price Range	Amount above or (below) top of the range				
		Gulf	Texaco	Imperial	BP	Ultramar
1960	16	10	0			
1961	37	(20)				(37)
1962	25	(8)	2,(13)	(13)		(25)
1963	25	(8)				(25)
1964	4	15	4	8		(2)
1965	3	17		10,2		0,(3)
1966	8	14	(1)	(1)		(5)
1967	66	(24)		(30),(34)		(34),(66)
1968	46	(1)		(11)	(34)	(43),(46)
1969	31	14	23	4,2	(13)	(28),(31)

Source: Appendix Table F-7.

The period from March 18, 1971 to 1972 is an important one with respect to Tia Juana Medium. It illustrates the effect of tightening markets as members of OPEC gained power. The highly favorable prices that Ultramar had been able to obtain were no longer available after March 18, 1971. By mid-1971, its prices were on a par with those of BP, and in early 1972 they considerably exceeded BP's. In early to mid-1972 they also matched Imperial's prices before becoming slightly lower in the second half of 1972.

Table 12 of Appendix F contains FOB prices paid by Canadian companies for several types of Venezuelan Light crude oils. There are no direct third-party price standards against which they can be compared. They are, however, generally within the same specific gravity range as Lagomedio and Lagomar whose FOB price comparisons were summarized in Table 5. A comparison of the prices which Canadian companies paid for Lagomedio and the crude oils in Table F-12 reveals relatively small differences — differences which are much smaller than those observed to have been paid in third-party transactions and by subsidiaries shown in Table 5. Thus, there is good reason to believe that the conclusions regarding price comparisons of other types of Venezuelan Light crude oil from Table 5 (based on Table F-5) are applicable to those found in Table F-12.

FOB and CIF prices, starting from 1965, for a range of Nigerian crude oils are contained in Tables F-8 and F-9 of Appendix F. The principal purchasers of these crude oils were Gulf and BP whose prices were close to each other and also fell well within the range of known third-party prices, except possibly for Gulf in 1971-1972.

Experience with respect to FOB price comparisons for Kuwait and Iranian Heavy crude oils are summarized in Table 9. During the five years when Shell was buying Kuwait crude oil, starting in 1958, the FOB prices paid by Shell were either near the top of the term third-party price range or well above it. In its purchases of Kuwait, Gulf tended to pay slightly above the top of a wide range for 1963 through 1964. Between 1965 and 1968, the prices it paid were always below the top of the range, although tending towards the high side of third-party prices for 1965 through 1967. Gulf's prices for Iranian Heavy were generally below the top of the range and also just below the median of available term third-party prices. BP's prices for Kuwait and Iranian Heavy were near the bottom of the third-party range in 1968 and near the top in 1969. In the first and second halves of 1970, Gulf's prices for Kuwait were only slightly above the top of the range by 5¢ and 1¢, respectively, while BP's prices for Kuwait were 1¢ and 14¢ below the top and its prices for Iranian Heavy were 1¢ below in the last half of 1970. In Table 10, the available CIF price comparisons for Kuwait and Iranian Heavy found

Table VII-9

Comparative FOB Prices of Imported Kuwait and Iranian Heavy (31.0° — 31.9° API) Crude Oils, 1958-1970 (U.S. cents per barrel)

Year	Size of Term Third-Party Price Range		Amount above or (below) top of the range				
	Kuwait	Iranian Heavy	Kuwait			Iranian Heavy	
			Shell	Gulf	BP	Gulf	BP
1958	30		(1)				
1959	12		26,8				
1960	23		16				
1st half	17		22				
2nd half	23		12	20,12			
1961	25		0	(12)			
1962	14		16	4			
1963	28	6		3		3	
1964	21	13		2		3	
1965	39	24		(11)		(13)	
1966	26	14		(9)		(10)	
1967	35	16		(6)		(10)	
1968	22	18		(11)	(17),(7)	(7)	(8)
1969	5	3		6	0	8	1
1970	19	5		(4)	(14)		(1)

Source: Appendix Table F-10.

in Table F-11 are shown. For Shell the CIF costs for Kuwait turned out to be considerably higher *vis-à-vis* the top of the third-party range than those shown for FOB prices in Table 10.

Gulf's CIF prices for Kuwait were considerably above the top of the range from 1960 to 1964 and slightly above the top from 1969 to the first half of 1970. Gulf's higher transportation costs added to its FOB price disadvantage *vis-à-vis* third-party buyers. From 1965 to 1968, Gulf's CIF prices were below the top , but still on the high side of available third-party prices. In the second half of 1970 and in 1972, Gulf's prices were considerably below the lowest third-party price because of the relatively lower transportation costs enjoyed by Gulf at that time. Its transportation cost advantage was even greater in 1972 for shipments to Portland via very large crude oil carriers to Point Tupper and transshipment to Portland.

Table VII-10

Comparative CIF Portland Prices of Imported Kuwait and Iranian Heavy (31.0° — 31.9° API) Crude Oils, 1958-1970 (U.S. cents per barrel)

Year	Size of Term Third-Party Price Range		Amount above or (below) top of the range				
	Kuwait	Iranian Heavy	Kuwait			Iranian Heavy	
			Shell	Gulf	BP	Gulf	BP
1958	30		6				
1959	12		32,14				
1960	24		44	37			
1st half	17		50	39			
2nd half	24		40	37			
1961	25		28	11			
1962	14		47	30			
1963	32	10		8		40	
1964	21	13		19		51	
1965	51	36		(16)		(9)	
1966	39	27		(14)		(15)	(22)
1967							
1st half	54	34		(15)		(3)	
2nd half	37	18		(30)		(18)	
1968	47	42		(22)	(34),(24)	(18)	(25)
1969	15	13		7	(5)	17	(5)
1970	19	39		(41)	(75)		(99)

Source: Appendix Table F-11.

Gulf's CIF prices for Iranian Heavy were considerably higher than the top of the range in 1963/1964 and 1969. They were below the top from 1965 to 1968, and generally in the mid-range of the third-party prices except for the second half of 1967 when they matched the lowest third-party price.

7. Costs Arising from Product Imports

The Green Book's estimate of the costs arising from product imports is based on the assumption that *all* product imports took place because domestic wholesale product prices were in excess of those which would have occurred if the Canadian market had been competitive and refiners had purchased foreign crude oil at arm's length prices. The additional costs associated with product imports in comparison with crude oil imports used in the calculation of the alleged overcharge portion of product imports were the payments for tariffs to the Canadian government, plus the differential on shipping costs between petroleum products and crude oil. The figures used for these costs were taken from an Imperial Oil study made in 1964.

This allegation by the Director stems from his allegation that the prices paid for imported crude oil by a number of the largest subsidiaries to their parents were too high. It is argued that, to the extent that crude oil costs were passed on, this encouraged the import of products whose prices reflected lower crude oil costs. A failure to pass on higher crude oil costs completely is also seen by the Director as resulting in product imports through reduced profit opportunities and, consequently, in lower refinery investment.

Import of products for the reasons cited in the Green Book are logically consistent with the effects of high prices for imported crude oil paid by a number of subsidiaries. There usually are, however, a number of possible reasons for product imports other than the price paid for imported crude oil, and some of these were probably present. It may not always pay refiners to match output to the exact proportions of domestic demand, particularly if shortfalls in domestic supply of some products can be covered by imports. Imports (and exports) may result from short-term domestic or international changes. Even in the Green Book's narrow terms there were imports which should have been excluded from the overcharge calculations, such as imports to the provinces and territories west of Ontario (areas that were using domestic crude oil), that made up almost 12 per cent of the total in 1965. It is also highly doubtful that the reasoning in the Green Book would support including a highly refined product such as lubricating oil, which accounted for two-and-one-half per cent of product imports east of Manitoba in 1965. Whether, and to what extent, the price of imported crude oil was a direct or indirect influence, and what other forces were at work, is much more difficult to determine for the remaining imports. Nevertheless, it was a task that should have been undertaken by the Director before proceeding to arrive at a summary measure of the "cost" of product imports.

A second difficulty with the estimates in the Green Book is the average per-barrel tariff and the shipping-cost differential used. The problem occurs because the purpose of the Imperial estimates in 1964 was different from that to which its estimates were put in the Green Book. The goal of the Imperial study was to compare the cost of refining in Eastern Canada with the cost of refining in the Caribbean and the shipping of products to Canada. The configuration of Imperial's sales for the Atlantic Provinces and Quebec combined in 1964, shown in the document, is very different from that of total industry product imports, as is clear from the following comparison:

	Imperial's Sales %	Industry Imports %
Motor gasoline	23.7	5.1
Middle distillates	40.7	29.0
Heavy fuel	27.4	51.0
"Other" products	8.1	14.9*

* Aviation gasoline and aviation turbine fuel are included with "other" products. Without them, "other" products accounted for 10.8 per cent of imported products.

Source: Internal Imperial Oil document.

Given that the tariff on gasoline was 35¢ per barrel (M.F.N.) and on heavy fuel oil 11.7¢ per barrel, the difference in configuration results in a large difference in the average weighted tariff cost. The weighted average used by Imperial in its study and adopted by the Director for his purposes was 20¢ per barrel. This compares to a figure between 14.7¢ and 16.4¢ per barrel for the products actually imported into Canada in 1964. A range is required because some products were tariffed at either 11.7¢ or 35¢ per barrel, depending on their specific gravity. Thus the magnitude of the Director's error resulting from his use of Imperial's figure is from 4¢ to 5¢ cents per barrel. The actual error turns out to be somewhat less because the combined transportation cost differential (12¢ per barrel) and tariff cost (20¢ per barrel), which adds up to 32¢ per barrel, was reduced in the Green Book's calculations to a combined figure of 30¢ per barrel. Given that the relative importance of gasoline and heavy fuel oil imports was not much different in 1964 than during 1960-1973 — 5.1 per cent versus 5.3 per cent, and 51.0 per cent versus 49.1 per cent — the error present in the 1964 figures is also present in the Green Book estimates for all of the years taken as a whole. Given the importance of the pattern of product imports in the determination of weighted per-barrel tariff payments, the authors of the Green Book should have computed tariff costs based on actual imports each year, rather than relying on an average figure for one year.

Transportation cost differentials between crude oil and products should also be sensitive to product configuration. However, the information available in the inquiry does not permit any conclusion to be drawn as to whether 12¢ per barrel, the figure used by Imperial in its 1964 study, was higher or lower than that which existed for the actual distribution of product imports that occurred.

8. Summary and Conclusions

1. The prices paid to Sun Venezuela in third-party transactions were much lower than the Venezuelan crude oil prices paid to their various parents

by Canadian subsidiaries. The prices paid in third-party transactions for imports of Middle East (and Nigerian) crude oils into Canada were also lower than the prices paid by Canadian subsidiaries. In comparison with a range of term third-party prices, the Canadian subsidiaries often paid more than the highest term third-party prices. In the instances where the prices paid by the subsidiaries were below this level, the prices paid tended to be in the top half of the range of term third-party prices. Taken together, the conclusions apply to comparisons throughout the 1960s. Approximate equality between the prices paid by Canadian subsidiaries and third-party prices developed in the early 1970s as crude oil prices started to rise.

2. Although the subsidiaries did not all buy the same crude oils, and they sometimes obtained more favorable prices for one type of crude oil than for another, certain generalizations are nevertheless possible. Irving Oil, Suncor and Texaco paid the highest prices overall. They were followed by Gulf and Imperial and then by Shell. The prices paid by BP usually compared favorably with third-party prices.

3. These price comparisons reinforce other evidence that there was no harmonization of imported crude oil prices by either the parents of the Canadian subsidiaries or by the subsidiaries themselves. Attempts by Canadian companies to learn the prices paid by other companies in order to have defensible positions with the tax authorities were not part of a conspiracy, but were ordinary intelligence gathering. There is no evidence that the companies were generally forthcoming in revealing to their competitors the prices they paid for imported crude oil.

4. There is no reliable evidence as to whether and to what extent higher crude oil costs may have been passed on in higher prices. General analysis suggests that it is unlikely that there was any significant pass-on since the circumstances for this to occur were not present. To the extent that there was a pass-on, it would have occurred primarily in sales of gasoline through retail outlets.

5. The Green Book attributed all product imports to excessive domestic product prices and to inadequate investment in refining capacity. Excess costs of imported crude oil were seen as a contributing factor in both cases. The destination and composition of product imports suggest that there were also "legitimate" reasons for product imports. While the factors cited by the Director probably had an influence on the volume of product imports, the available evidence does not allow this influence to be measured.

6. Finally, the Chairman rejects that there is any validity in this part of the Director's case in respect to an "overcharge". His views are set out in detail in the conclusions to Chapter IV and in the final chapter on Conclusions and Recommendations.

C

Current Issues

VIII

The Production and Pipeline Sectors

1. Introduction

In Volume IV of the Green Book the Director made a number of allegations of anti-competitive conduct in those sectors of the Canadian petroleum industry dealing with the production of domestic crude oils and the transportation of those oils by pipeline during the period 1958 to 1973. More specifically, he claimed that concerted activity by producers and purchasers, acting in a favorable environment resulting in part from the National Oil Policy and the Alberta Government's prorationing scheme for crude oils, produced a price setting mechanism for domestic crude oils that suppressed price competition. Concentration of ownership in pipelines was the key factor enabling the anti-competitive price mechanism to work. He alleged that integrated petroleum companies "created barriers to entry in the refining sector" by restricting access to preferred crude oils and to pipeline capacity, by charging "excessive profit rates" and by "discriminating against non-owner shippers".

Having made the above allegations (and having advanced certain related remedial proposals) in the Green Book, the Director subsequently advised the Commission that he did not intend to call any witnesses or to introduce any further evidence beyond the Green Book to support his position or to update his examination of the production and pipeline sectors. At the same time, he did not withdraw any of his Green Book allegations.

At the conclusion of the hearings the Director, in submitting his argument, did express some continuing concerns related to the production and pipeline sectors. He suggested that:

1) The regulatory agencies currently responsible for controlling access to domestic crude oil should be encouraged to consider competition policy in designing and administering their regulations.

2) The regulatory authority of the Alberta Petroleum Marketing Commission to market Alberta crude oil produced from crown leases can be a significant barrier to entry in gaining access to crude oil . . . barriers to entry have been

established by the APMC in preventing independent marketers from gaining access to crude oil.

3) Uncertainty remains for independent resellers seeking access to pipelines when line space is limited.

Although he expressed the above concerns, the Director did not advance any remedial proposals as part of his final argument.[1]

The Commission had to decide how it should respond to the above circumstances in conducting its inquiry. Hearings and related work in regard to other sectors of the industry meant that the Commission did not have the luxury of time to carry out itself an in-depth examination of the production and pipeline sectors. On the other hand, in Volume IV of the Green Book, the Director had made serious allegations against the major petroleum companies, Interprovincial Pipe Line Limited (IPL), and some government programs which required a response from the Commission.

The Commission deferred holding hearings relating to production and pipelines until the latter part of its proceedings in order to give any interested person as much time as possible to prepare and to make representations to the Commission.

At the beginning of its inquiry the Commission had invited all potentially-interested persons, both by newspaper advertisement and by direct mail, to advise it of any concerns or complaints they wished to make relevant to the Commission's mandate in any sector including the production and pipeline sectors. In addition, the Commission had held regional hearings in major centres across Canada to give provincial governments, local organizations and individuals an opportunity to come forward. Partway through its inquiry the Commission again contacted as many companies and groups as it could identify which might have an interest in the production and pipeline sectors, advising them of the Commisson's willingness to hold a special hearing for the purpose of receiving submissions as to how the Commission should proceed with regard to those sectors.

Despite this widespread publicity and these invitations, the Commission, with one exception which is discussed below, received no complaints or representations suggesting the need for a substantive inquiry into those sectors.

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[1] The arguments on this subject were submitted in 1984, prior to the Western Accord of 1985 which called for the market, rather than Canadian governments, to determine domestic crude oil prices. The role of the APMC in marketing crude oils has greatly diminished since the deregulation of domestic crude oil prices.

Interprovincial Pipe Line Limited, some major petroleum companies and some of the government agencies criticized in Volume IV, advised the Commission that they wished to make submissions and asked that the Commission receive sufficient evidence to enable it to include in its Report some assessment of the validity of the statements of fact and the allegations in Volume IV of the Green Book.

It was clear that the production and pipeline sectors of the industry, as described in the Green Book, had changed significantly in the post-1973 period and that a number of the concerns expressed by the Director had been overtaken by events. Important aspects of pricing and supply in both sectors had become increasingly regulated by governments. Federal and provincial government agencies now regulate, monitor and receive large amounts of information from companies in the production and pipeline sectors.

In the light of current regulation of both sectors, the virtual absence of complaints or concerns being brought to the Commission's attention and in the absence of further evidence from the Director, the Commission did not inquire in a substantive way into the production and pipeline sectors. It did, however, decide that it had a responsibility to inform itself of the current regulatory environment, to assess the very limited number of concerns that had been brought to its attention, and to offer some observations with regard to the contents of Volume IV of the Green Book.

Witnesses from the National Energy Board (NEB), the Alberta Petroleum Marketing Commission (APMC) and Alberta's Energy Resources Conservation Board (ERCB) testified at the Commission's invitation. The President and Chief Executive Officer of Interprovincial Pipe Line Limited testified and several petroleum companies filed written submissions.

While the evidence concerning production and pipelines was relatively limited and the Commission did not examine these sectors with the same thoroughness as others, it is able to make a number of observations.

The actual *prices* for domestic crude oils during the time covered by the Green Book are the subject of Commission analysis in Chapter VI which addresses concerns related to the National Oil Policy and the Director's claim of an "overcharge" for Canadian crude oils between 1958 and 1973. Between 1974 and 1985 domestic crude oil prices were established, not by companies or markets, but by federal-provincial agreement. For those reasons, domestic crude oil prices *per se* are not discussed here.

A number of the Director's concerns and criticisms had to do with what in his submission were undesirable consequences and costs of federal and provincial government regulatory schemes and interventions. The Commission agrees with the Director when he recommends that regulatory agencies give close attention to the possible consequences for competition when designing and administering their regulations. It also agrees with the Director that certain regulatory activities have reduced competition and have had the effect of raising prices paid by Canadian consumers of petroleum products. For example, there is little doubt that, as the Director has argued, the Alberta Government's prorationing scheme and the Federal Government's National Oil Policy had the effect of raising the price of domestic crude oils and hence petroleum products, for many Canadian consumers. On the other hand, there is no doubt that both programs produced many benefits as well.

The Commission obviously could not carry out and report on a full study of the costs and benefits of government interventions in the production and pipeline sectors. Any meaningful examination of those regulations requires, however, some appreciation of the circumstances which led to government interventions, the policy alternatives available and the benefits achieved. It is not enough to identify only the costs. At the same time, the Commission endorses the Director's concern that policy makers should take careful account of the potential competitive effects of policy alternatives before them.

2. The Production Sector

(a) Introduction

The crude oil production industry engages in a wide set of activities, ranging from the gathering of crude oil from the reservoir to the delivery of crude oil to the terminal facilities of the trunk pipeline. In addition, the production sector provides field storage and undertakes any necessary primary processing.

The production sector is not as concentrated as most other sectors of the petroleum industry. Ownership of Canadian oil production was characterized by the initial predominance of Imperial Oil Limited. Imperial drilled the discovery well at Leduc in 1947 and in 1951 owned about 40 per cent of western Canadian production. But entry into the production sector was relatively easy (due in part to Alberta's prorationing scheme) so that Imperial Oil's market share steadily declined to about 15 per cent in 1978.

To understand the operation of the production sector it is necessary to appreciate the nature of oil reservoirs and the tendency of oil to migrate within that reservoir.

Unlike a solid mineral such as iron or coal, oil exists in a reservoir as a liquid and is subject to flow within the reservoir through pressure change. Withdrawal of oil from one part of a pool reduces the pressure in that area and oil in neighboring areas begins to migrate in response to the pressure change. This process results in the "drainage" or loss of an owner's reserves to neighbours' lands if he too does not drill a well and produce reserves. In fact, an owner is only given the right to recover reserves rather than ownership of the specific reserves underlying his property as would be the case for a solid mineral. This concept has been referred to as the "rule of capture" or in other words, you own what you can produce according to the rules.

The "rule of capture" explains not only the pressure to develop one's reserves (before others can develop theirs) but also the concern of each owner with the rate of production of other owners in a pool.

There are two types of crude oil producing properties — Crown and freehold. As the name implies, the first of these is property on which sub-surface rights are owned by a provincial government and in some instances, particularly frontier areas, the Federal Government. In the case of freehold property, sub-surface rights, acquired before the Crown claimed them, were granted to a private or corporate landowner. The ratio of Crown to freehold property varies considerably from field to field. The Province of Alberta has Crown rights to about 80-85 per cent of total crude oil production, whereas in Saskatchewan, Crown production has been about 60 per cent. A company, normally as a result of bidding on property, may acquire a leaseholder's right to the oil recovered from certain lands. Such oil, after payment of taxes and royalties to the appropriate Crown or freehold owner, is owned by the company producing from that property.

Prior to 1974 crude oil was purchased by individual companies in private, bilateral agreements. The prices offered for crude oil were posted by the purchasing company on the basis of its assessment of market conditions. Field production was commingled and moved through gathering and trunk pipelines to refining markets in Canada and the U.S. In practice, prices related, through generally accepted quality differentials, to those set by Imperial Oil for Redwater crude oil.

Until 1974, and subject to the requirements of Alberta's prorationing scheme, the traditional method of buying and selling Canadian crude oil in the field involved direct negotiations between producer and purchaser. This continued to be the case after 1974 for Alberta freehold oil, and for both Crown and freehold oil in provinces other than Alberta. Although, on occasion, the resulting contract was limited to production from specific wells, the agreement between the parties normally involved the sale and purchase of all of an owner's production within a given field. The volumes produced could vary from month to month with changes in field operations or in market demand, but ownership of the total volume was transferred to the purchaser under the terms of the contract. Thus, such contracts for the purchase of crude oil at the wellhead did not specify volumes. Another characteristic of this type of agreement was that it almost invariably permitted either party to cancel on 30 days' written notice. Similar acquisition practices continue today in much of the freehold production in Alberta and in British Columbia, Saskatchewan and Manitoba. The recent deregulation of Canadian crude oil prices has not altered these procedures.

From 1974 to June 1985 crude oils produced from Crown lands in Alberta were marketed by the Alberta Petroleum Marketing Commission at prices established by federal-provincial agreements. The role of the APMC and the recent changes in that role are described later in this Chapter.

Traditionally, in addition to owned production, there were three processes applicable to both Crown and freehold production through which crude oil could be acquired or purchased. The first of these (referred to by Imperial Oil as "first purchase control") involved the purchase of a specific crude oil at the wellhead. This was simply a purchase of crude oil under contract from another producer as the oil was first measured into surface tankage or into a gathering pipeline.

The second major area of crude oil purchasing activity was downstream from the oil fields, usually at a major pipeline terminal. At these points the specific crude oils have become a blended stream. At present, more than 200 crude oils produced in Alberta are combined in various gathering pipelines to produce about 10 to 12 streams. In addition to moving many of these as they are received, Interprovincial Pipe Line (IPL) may also further combine others as mixed blends. The purchase of these various crude oil streams is normally less formal than the contractual purchase of oil at the wellhead. (Imperial Oil documents in evidence and cited by the Director, referred to these purchases as "second purchase control").

The third kind of crude oil acquisition is "spot" purchases with no long-term implications. Normally these purchases involve relatively small volumes needed by a company to balance supply with changes in demand.

(b) The Director's Concerns Regarding Prorationing and the Policies of the ERCB

In the Green Book the Director had been critical of both Alberta Government interventions and company conduct in the production sector and in the marketing of its crude oils.

In regard to Alberta's market prorationing scheme, as administered by Alberta's Energy Resources Conservation Board (ERCB), he stated that:

> Alberta's prorationing system has gone further than was necessary to eliminate waste and unitize production. Market prorationing was used in addition to conservation prorationing. Alberta restricted demand well below the combined (Maximum Efficient Rate) of its various fields and in the process has affected the market price of crude oil. The limitation of provincial output to the sum of the monthly nominations filed by purchasers, as a proxy for market demand, is not required for conservation purposes. This process eliminates competition among suppliers and effectively fixes a price. As such, it is more closely tied to producers' objectives, including the prevention of a decline in prices, than to consumers' interests. Insulated from independent shifts in the supply or demand for oil that would otherwise have caused this erosion, the price of Alberta crude oil for years remained higher than the price that would have prevailed in a free market.
>
> Alberta, and its prorationing scheme, was instrumental to the industry's ability to maintain high absolute crude prices. Producers in Saskatchewan were free to take advantage of the umbrella so provided, since the provincial government chose not to share the burden of market prorationing with Alberta.

Since the 1950s the ERCB and its predecessor have regulated most matters pertaining to the drilling for and the production of oil and gas in Alberta. The ERCB and the market prorationing program it administers determine the amount of oil produced at any given time in Alberta.[2]

Prorationing has been an integral part of the Alberta oil industry since December 1950. Its primary function is to provide a means of allocating production within and among a large number of oil pools (some 750 pools in 1983) during periods when productive capacity is in excess of market requirements. Productive capacity has been consistently greater than sales since 1949, and indeed this continues to be the case. (The only time during the past 34 years when Alberta production was unrestricted was between March 1973 and July 1974 and intermittently between February 1979 and September 1980, both periods of international oil supply disruptions.) Prorationing has been the subject of numerous studies. It is generally agreed that prorationing both permitted relatively easy entry into the production sector in Alberta and virtually eliminated price competition amongst producers.

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[2] The Energy Resources Conservation Board of Alberta is established by the Energy Resources Conservation Act, R.S.A. 1980, to regulate most matters pertaining to the drilling for and production of oil and gas in Alberta. It is a regulatory body often called upon to adjudicate conflicts arising between competing industry interests, between industry and non industry interests and between the public interest and private rights. The purposes of the ERCB, relevant to the oil and gas area, are set out in Section 4 of the Oil and Gas Conservation Act, R.S.A. 1980.

Witnesses from the ERCB argued before the Commission that the Director had failed to appreciate the reasons for the plan or how it functioned. They claimed that the Director appeared to have directed his attention to only one perceived consequence of the plan (a lessening of price competition) and to have ignored whether or not there were any other options available. In their view the Director should have considered whether the impact on the Canadian consumer over the 30-year period would have been better or worse if a proration system had not been implemented.

The ERCB acknowledged that "the plan prevented domestic refiners from purchasing oil at depressed prices for short periods of time and consequently may have resulted in modestly higher consumer costs during the 1958 to 1973 period". However, in its view, any such cost was more than offset by the benefits achieved by prorationing and "the benefits that might have been obtained from lower consumer costs during this period would have been offset many times by the additional costs that would have occurred during the late 1970s and 1980s when additional volumes of offshore oil would have been required at significantly higher costs".

Although the Western Accord of 1985 did not change the role of the ERCB or prorationing *per se*, the Commission understands that an Alberta Government task force presently has the prorationing plan under active review.

(c) The Director's Concerns Regarding the Policies of the Alberta Petroleum Marketing Commission

Both in the Green Book and in his argument at the conclusion of the hearings, the Director expressed concerns in regard to the competitive effects of the policies of the Alberta Petroleum Marketing Commission (APMC) throughout the period 1974-1984:

> The APMC has reinforced the pattern of "first purchase control" by limiting the number of eligible buyers since 1974.
>
> The regulatory authority of the APMC to market Alberta crude oil produced from Crown leases can be a significant barrier to entry in gaining access to crude.

In 1973, the APMC was established with the power to set prices and the terms of sale for all petroleum produced from Crown lands in Alberta. Marketing of crude oil by the APMC commenced on March 1, 1974.[3]

See footnote on facing page.

Prior to June 1985, the APMC, through its price bulletins or postings, prescribed the prices for petroleum produced from Crown leases with the object of maintaining the average field price as agreed between the Federal and Alberta Governments. This involved pricing according to variations in quality based on density and sulphur content. The APMC took delivery of the production at field batteries or feeder pipeline inlets, arranged for transportation to points of sale, and sold to buyers of its choice under various types of contracts ranging from fixed term and volume contracts to spot sales.

Between March 1, 1974 and March 31, 1980 sales of crude oils which fell under the authority of the APMC could be made only to those listed as "approved purchasers" by the APMC. The list of "approved purchasers" consisted simply of those companies who had traditionally been buying Alberta crude oils prior to the creation of the APMC. The list was subsequently expanded to include Petrofina and Turbo. Petro-Canada assumed Pacific Petroleums' position on the list with its acquisition of that company in 1979. Witnesses from the APMC told the Commission that the list was composed of "reliable" customers. It was seen by the APMC as a means of protecting itself against the risk of not being paid for its crude oils (something that never, in fact, happened) and as a vehicle for "being seen to be fair" to traditional customers who had bought crude oil in Alberta for many years. The APMC was concerned that historic customers not be denied supplies of "scarce resources" during periods of tight supply as a result of sales to new customers outside of Alberta.

During much of 1974 producers could sell to buyers of their choice among those listed as approved purchasers. The sales were made at the prices prescribed in the APMC's price bulletin and the operators received the sale proceeds from the buyers. The APMC then received from the operators the sale proceeds pertaining to the Crown royalty share. Between December 1974 and March 1980, the operators would deliver crude oil to approved purchasers of their choice but the sales were made by the APMC under

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3. In September, 1973, the Government of Canada imposed a five-month price freeze on crude oil. At that time, control of the pricing of Canadian crude oil passed from the industry to government, where it resided until June 1985. During that time the prices for Canadian crude oils were determined by federal-provincial agreements. The Alberta Petroleum Marketing Commission was created by the Alberta Petroleum Marketing Act of 1973 (S.A. 1973, c.96) as a means by which the Alberta Government could exercise control over the disposition of Alberta crude oil. The Commission was to act as the sole agent of the Crown in disposing of the royalty share of crude oil (and pentanes plus) production from Alberta Crown land and as the sole agent of the lessee in disposing of the lessee's share of production from the same lands. This mandate was fulfilled in phases over the next six years until April, 1980.

contracts with the approved purchasers and the sale proceeds were paid by the buyers to the APMC. The APMC told the Commission that as of April 1, 1980, the approved purchaser system came to an end. While this change in policy made APMC supplies somewhat more readily available to Canadian petroleum companies who had not purchased from the APMC historically, the APMC continued to be somewhat selective in choosing its customers. It chose not to sell to brokers in the belief that there was no place for "middlemen" in the same markets into which it was selling. Its selectivity was further modified at times depending upon the availability of supplies for exports surplus to Canadian requirements.

A major change in the process of acquiring Alberta crude oil occurred in April, 1980. At that time, all private contracts between producers and purchasers for the acquisition of Crown oil were abrogated and the APMC established itself as the sole purchaser of all such oil.

After 1980, the APMC directly took possession of all Crown production — both royalty and lessee share — from producers at the wellhead. The Commission arranged for the physical movement of the crude oil to Edmonton and other Alberta pipeline terminals. This was done through gathering pipeline systems, in some of which the APMC had become the only shipper. In addition, the APMC had also taken on the role of crude oil pricing, posting the wellhead prices for all Crown oil. It also offered to buy and move any freehold crude oil under the same conditions as Crown oil.

The APMC had become the marketer of all Crown oil in Alberta — setting wellhead prices within the limits of the average price established by federal-provincial agreements, buying all of the Crown production, moving it through gathering pipelines and selling to purchasers downstream. Under this process, refiners without access to their traditional sources of supply (including their own production) were required to make monthly nominations to the APMC, identify the volumes of each stream of oil desired and indicate where the oil was to be shipped. If crude oil so acquired could not be used as initially designated, the purchaser was required to release the oil to the Commission for re-disposition. These procedures concerning Crown oil in Alberta — representing some 85 per cent of the province's light crude oil production — effectively meant that companies had lost much of their role in terms of the acquisition, pricing, transportation and disposition of western Canadian crude oil.

No legislative guidance existed regarding the exercise of the APMC's discretion as to how it might sell petroleum. The first priority of the APMC was to sell all the petroleum that could be produced from Crown leases every month. The next priority was to allocate the available supply among buyers in an orderly manner, consistent with the public interest in Alberta.

The APMC's role as the sole marketer of most of Alberta's crude oil changed dramatically with the federal-provincial agreement (the Western Accord) to decontrol or deregulate the price of domestic crude oils as of June 1, 1985. Today only the Crown's royalty share of production is required to be delivered to the APMC. Instead of marketing 85 per cent of Alberta's light crude oil production as was the case prior to the Western Accord, currently only about 30 per cent of such crude oils are handled by the APMC. In addition to selling Alberta's royalty share, it acts as an agent for many freehold producers. The balance is on the open market much as it was prior to the creation of the APMC in 1973. The APMC of today is like any other seller or agent (several of which have recently become established) in its dealings with buyers. Prices are negotiated between the parties. Regardless of any competition policy concerns one might have had about the APMC's former practice of selling only to "approved purchasers" or otherwise restricting supply, today, no one, including the APMC, has a sufficient corner on supplies of crude oil so as to restrict or deny access to potential buyers.

(d) The Director's Allegations Against the Companies

The Director advanced a number of serious allegations against some of the major petroleum companies, and in particular, Imperial Oil, in his analysis of the production sector in Volume IV of the Green Book. He alleged that integrated companies utilized a price-setting mechanism for domestic crude oils that suppressed price competition among them. Ownership of trunk pipelines by major, integrated firms facilitated information sharing and resulted, he alleged, in discriminatory conduct towards non-owners. According to the Director a high degree of concentration of "controlled" crude oil in the hands of a few gave them discretionary power to erect entry barriers to potential purchasers and to limit price competition among producers. In his view Imperial Oil's "first purchase control" system for buying crude oil at the wellhead gave Imperial unacceptable control over access to domestic crude oils. He further alleged that control over the price structure permitted the leading firms to confer cost disadvantages on other refiners by directing "over-valued" crude oils to them.

(e) The Commission's Observations

As explained earlier, the Commission did not conduct an extensive inquiry into the above allegations against the companies. Little evidence was called, extensive regulation had been introduced and, in contrast to other sectors, those persons allegedly hurt by anti-competitive conduct either did not seek to tell their story to the Commission or expressly denied that they had been hurt by the activities in question.

The Commission returns to this matter later at the conclusion of its discussion of the pipeline sector because the two sectors are closely interrelated in the Director's allegations against the companies. In the Commission's view the Director failed to establish his allegations against the producing companies. His allegations concerning Imperial Oil's "first purchase control" appear to have been based on a misunderstanding of the western crude oil market and its terminology. Submissions from producers and the evidence from several provincial and national regulatory bodies, not contradicted by the Director in evidence or argument, persuade the Commission that the Director's allegations were not well founded and, in any event, are of little relevance to the industry today.

3. The Pipeline Sector

(a) Introduction

Once crude oil is above the ground, the transportation sector must deliver it to refineries in large volume often over long distances. The two most cost-effective methods of crude oil transportation are tankers and pipelines. Oil and oil products are transported in bulk throughout the world by tankers when water transport is possible but, over land, almost exclusively by pipeline. The major oil fields in Canada are land-locked and pipelines furnish the only efficient means of moving large volumes of crude oil. In general, pipelines enjoy economies of scale: the larger the line, the less the unit cost of transportation. Because of the size of the Canadian market, relatively few trunk pipelines are needed.

As is evident from the map at the back of this Report, the crude oil pipeline system in Canada is dominated by two main trunk lines: one, stretching east from Edmonton, serves Montreal, Ontario and the export market of the Great Lakes region of the United States; the other, from Edmonton to Vancouver, serves part of British Columbia and the Northwestern United States. The first trunk line, operated by Interprovincial Pipe Line Limited, is the longest crude oil pipeline in the western hemisphere extending 9,100 kilometers through the northern United States to Montreal. The second main system, Trans Mountain Pipe Line, originates in Edmonton, traverses the Rocky Mountains and swings southwest to Kamloops and Vancouver. From there a major lateral line extends southward to refineries in the Puget Sound area of the United States. Providing these two main transmission lines with crude oil are a number of feeder lines that take the oil from field gathering systems.

The original Interprovincial line was from Edmonton to Superior, Wisconsin, a distance of about 1750 kilometers of which 480 kilometers were in the United States — with various delivery points in Saskatchewan and Manitoba. Oil was sent by tanker from Superior to Sarnia.[4] In 1953 the line was extended from Superior to Sarnia and in 1957, Sarnia was linked with Port Credit, near Toronto. A line from Superior to Sarnia via Chicago was completed in 1969 and an extension to Montreal was finished in 1976. There are now three lines running side by side between Edmonton and Superior and two lines from Superior to Sarnia. One of the lines is used to transport refined products as far as the Winnipeg area.

Imperial Oil was responsible for the organization of IPL and provided the financial guarantees and undertakings for the initial financing in the early years. Nevertheless IPL officials insisted before the Commission that Imperial had always been treated no differently than any other shipper.

Between 1966 and 1977 Imperial Oil held 33 per cent of the shares of IPL, Gulf had just about 7 per cent, and Shell had just under 2 per cent; the balance was held by the general public consisting of some 19,000 shareholders. As of November, 1985, Hiram Walker Resources Ltd. was the principal shareholder of IPL, holding 34 per cent. Imperial's interest had been reduced to 22 per cent and Gulf's to about 6 per cent. The balance of the shares are widely held. IPL's Board of Directors consisted of 15 persons, 5 appointed by Hiram Walker (including a Vice-President of Gulf) and 3 from Imperial Oil.

IPL advised the Commission that both it and Lakehead operate as common carriers accepting tenders for shipments from shippers on a month-to-month basis. The company has no long-term contracts with shippers using its transportation services. In 1982 42 shippers tendered shipments for delivery to 44 separate refineries. In 1983 44 shippers used IPL. Interprovincial carries mixed streams of light, medium and heavy crude oils with different gravities and sulphur contents, synthetic crude oils, liquified natural gas products containing propane, butane and condensate, and refined petroleum products.

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[4] Interprovincial and its wholly owned subsidiary, Lakehead Pipe Line Company, Inc. ("Lakehead") own and operate a pipeline system for the transportation of crude oil and other liquid hydrocarbons from Western Canada as far east as Montreal. Interprovincial, incorporated by Special Act of the Parliament of Canada in 1949, owns and operates that portion of the pipeline system located in Canada. Lakehead, a Delaware corporation, owns and operates that portion of the pipeline system located in the United States.

Interprovincial does not own any line fill (oil in the line) or working stock (oil in the tanks), which is supplied by each shipper in the proportion that each shipper uses the line. The total value of the line fill and working stock in 1983 was approximately one billion dollars, indicating the investment shippers have in oil in the line at all times. The pipeline must be full at all times in order to operate. Before a barrel of oil can be delivered, a barrel of oil must be put into the pipeline to replace the barrel delivered. Capacity utilization depends therefore, on the rate of flow through the line.

Trans Mountain Pipe Line Company Ltd. was incorporated in 1951 by a special act of Parliament. The original system opened in 1953 and consisted of a single line from Edmonton to Burnaby and Port Mann, B.C. In 1954 and 1955 the line was extended to delivery points in the State of Washington.

Inland Natural Gas Co. Ltd. owns 47 per cent of Trans Mountain's outstanding shares. Another 20 per cent is owned by Transland Investments Ltd., itself largely controlled by Inland. The remaining shares are widely held by several thousand shareholders. No petroleum company is represented on Trans Mountain's Board of Directors.

Crude oil is imported for refineries in the Montreal area by Montreal Pipe Line Limited and its American subsidiary, Portland Pipe Line Corporation. Their system, with a 1977 capacity of 336,000 barrels daily, carries no Canadian produced crude oil. It transports foreign crude oil from the Atlantic seaboard at Portland, Maine, with its access to ocean-going tankers, to Montreal. However, it has not been fully utilized since the Interprovincial system was extended to Montreal in 1976. In fact, in 1979 and 1980 the Portland-Montreal pipeline operated at only 30 per cent of capacity.

There are a number of "dedicated" petroleum product pipelines leading from refineries to markets. Refined petroleum products are normally carried in separate pipelines from those that carry crude oil. In Eastern Canada, the Sarnia Products Pipe Line of Imperial Oil Limited and the Sun Canada Pipe Line of Suncor and Shell carry refined petroleum products from the Sarnia area to Toronto, servicing various locations en route. The Trans-Northern Pipe Line Company operates between Toronto and Montreal. The eastern section carries products from the Montreal refineries westward to Ottawa, Cornwall and Maitland. The western sector moves products eastward from Ontario refineries to locations as far east as Kingston. Another pipeline, Imperial Oil Limited's Quebec South Shore Products Pipe Line, delivers products from Montreal refineries to Boucherville and Drummondville. In the West, the Alberta Products Pipe Line from Edmonton to Calgary and IPL's line to Saskatchewan and Manitoba from Edmonton transport petroleum products. Trans Mountain, while still primarily a crude oil pipeline, has recently been used to ship petroleum products from Edmonton to Kamloops, B.C. and, on an experimental basis, to Vancouver.

Transportation charges in Canada and the United States are determined according to separate tariffs filed with the National Energy Board of Canada and with regulatory authorities in the United States. Separate tariffs are published for heavier grades of crude oil, for natural gas liquids and for refined petroleum products.

Movements of crude oil in IPL's system are called "batches" or "streams" and are divided into two broad categories: "mixed blends" and "segregated" or "separate streams". The latter are sometimes also called "specialty streams". Mixed blends are a mixture of various crude oils received into the system at Edmonton.

Separate streams consist either of a single crude oil or of a mix, or "batch", of two or three compatible crude oils. A separate stream would have to be of sufficient volume to justify separate handling, and would be shipped for any number of producers and shippers. Since the various streams pass through the same pipeline, a certain amount of commingling takes place when the head of one stream comes into contact with the tail end of the preceding stream. This mixture is called the "interface". Partly in order to contain the degree of intermingling or contamination during shipment and partly to facilitate reorganization of the various batches and streams at the major staging areas, en route "break-out" tankage is required for the storage of each separate stream.

Finally, there are exceptional or "special streams" requiring special handling. For example, a particular crude oil might contain contaminants which would adversely affect a refinery operation if delivered with conventional crude oils. It therefore must be shipped separately and "buffered" from other crude oils. These special streams are usually moved for individual shippers and are for a specific purpose.

(b) The Regulation of Pipelines

The Pipe Lines Act of 1949 provided for the regulation of pipelines within federal jurisdiction (those crossing provincial boundaries) and gave to the Board of Transport Commissioners broad regulatory powers over pipeline companies similar to those which that Board exercised over Canadian railways under the *Railway Act*. The Board of Transport Commissioners had power to oversee and was required to approve almost all aspects of pipeline projects.

As a result of the recommendations of the Borden Commission, the *National Energy Board Act* was passed in 1959. That Act created the National Energy Board and gave it regulatory powers over pipelines within federal jurisdiction. The NEB exercises a regulatory power over the construction, operation and maintenance of pipelines.

The NEB is empowered to regulate "all matters relating to traffic, tolls or tariffs", and has regulated pipeline tariffs since December, 1976. The NEB Act specifically requires that a company subject to the Board's jurisdiction charge only tolls specified in a tariff that has been filed with the Board and is in effect, or which has been approved by an order of the Board. Section 52 of that Act requires that all such tolls be just and reasonable and be charged equally to all persons at the same rate for equivalent services. The Board has power to disallow any tariff or tolls and to require a company to substitute tariffs satisfactory to the Board.

Section 55 of the Act provides that a company subject to the Board's jurisdiction shall not make any unjust discrimination in tolls, service or facilities against any person or locality. By reason of section 56 of the Act, the obligation of proving that no such unjust discrimination has taken place is placed on the company.

Recent amendments to the *National Energy Board Act* added a new Part VI.1. In brief, this provides that the Governor in Council may, by Order, direct the Board to assume control over the distribution of feedstock within Canada by regulating the movement of oil and gas out of a province or "the offshore area" of Canada. In effect, this amendment gives the NEB power to regulate the flow of petroleum in interprovincial trade.

In Alberta, where most of the provincially regulated pipelines are located, the Energy Resources Conservation Board holds public hearings before pipeline permits are issued. Since 1974, tariffs posted by these pipelines have also been monitored and reviewed by the APMC.

(c) The Director's Position Regarding the Pipeline Sector

The Director's investigation of the pipeline sector, as reported in Volume IV of the Green Book, led him to reach a number of conclusions that can be summarized as follows: the Canadian pipeline sector was a monopoly that was used to lessen competition both upstream and downstream; concentration of ownership in pipelines was the key factor enabling the anti-competitive price mechanisms to work; Interprovincial Pipe Line Limited was "effectively controlled" by Imperial Oil Limited and abdicated its operating responsibilities by giving control to Imperial over access to the pipeline and related storage tanks, with the result that market barriers in the refining sector were erected; the major petroleum companies, with the co-operation of IPL, gave themselves preferential access to the most valuable crude oils shipped as special streams and provided their competitors with "overvalued", lower quality crude oils shipped as mixed blends; "excessive profit rates" earned by refiner/owners gave them a cost advantage over independent refiners; IPL adopted rules which discriminated against small shippers; Interprovincial provided Imperial with information concerning competitors' activities which gave Imperial an advantage over those competitors; and meetings of shippers facilitated exchanges of information between competitors thus facilitating price fixing and discriminatory acts against smaller shippers.

(d) The Positions of the Companies

The nature of the various crude oil "streams" and "blends" was described briefly above. It is neither practical nor efficient to ship each crude oil type as a separate stream, giving rise to the necessity to mix certain streams or crude oil types together. When crude oils of different quality and value are blended in a mixed stream it becomes necessary to make a value adjustment for the crude oils tendered. This is because the refinery at the receiving end may receive a mixed blend that is superior or inferior in sulphur and gravity characteristics to the crude oil his shipper tendered in Western Canada. With the agreement of other shippers using the IPL line, IPL provided Imperial Oil with the necessary information to enable it, as the "shipper contact", to perform the value adjustments on behalf of all shippers.

Interprovincial Pipe Line Limited and Imperial Oil both made submissions to the Commission denying the Director's allegations regarding the purpose and effect of Imperial Oil's activities as the "shipper contact" and claiming that the Director had clearly misunderstood and misinterpreted IPL's and Imperial Oil's policies and practices.

IPL advised the Commission that from the early days of IPL's operations, "Imperial was appointed by the shippers, and not Interprovincial, to act as the shipper contact" and that Imperial essentially supplied "an accounting service". Imperial worked out the quality differential of each type of crude oil in a blend and then determined whether and how much each was to be debited or credited for the quality differential. With the consent and knowledge of all shippers, Interprovincial advised Imperial Oil of the volumes of the different types of crude oil, together with the shippers' names associated with those crude oil types, which had been blended into the mixed blend streams during the previous month. Interprovincial did not supply any information regarding the price of the various crude oil streams, and, indeed, it did not possess this information in the usual course of its business. In any event, from all indications the prices of crude oil were virtually public information.

IPL contended that the provision of information by Interprovincial to Imperial was open and public. It was done to facilitate the services that Imperial performed for the industry and because it was thought to be the most efficient procedure. Furthermore, any information given to Imperial by Interprovincial was also available, upon request, to any other shipper who wished to have such information.

Interprovincial's first indication that any other shipper was no longer happy with the practice came in 1972 when it was approached by Gulf and asked not to release any information relative to Gulf's operation to any other shipper without Gulf's consent. Immediately upon receipt of Gulf's objections, Interprovincial ended the practice of providing Imperial with information.

In conclusion, IPL submitted:

> The Director has made two fundamental errors which affect the rest of his findings. These errors are that the quality adjustment formula was used to set prices, and that Imperial controlled access to separate streams. Once these errors are pointed out, the Director's further allegations necessarily fail.

Imperial Oil's submission to the Commission concerning the production and pipeline sectors was to similar effect, as were submissions filed by Shell and Gulf.[5]

None of the smaller refiners or shippers allegedly hurt by the anticompetitive practices described in the Director's Green Book came forward to express any complaints or concerns. One such smaller shipper and refiner did appear at the Commission's request, namely, Consumers' Co-operative Refineries Limited. Its witnesses, in contrast to the Director's allegations, testified that they not only had no complaints against Interprovincial or Imperial but that indeed they thought both companies had served the industry well and competently.

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[5] Imperial Oil advised the Commission that it no longer provides IPL equalization calculations. That task is now performed by an accounting firm.

Mr. B.F. Dahlstrom, who has had long experience in the petroleum industry and is Refinery Manager for Consumers' disagreed with the Director's charge that the majors had, through shippers' meetings held in conjunction with Interprovincial, directed higher priced, less favorable crude oils to the Consumers' refinery in Regina. He did not feel his company had been taken advantage of in the utilization of the pipeline. Mr. Dahlstrom made this comment about Imperial: "as an agent in purchasing, they have been a totally honourable company and I have the highest regard for them from the standpoint of our relationship with them."

Officials of the National Energy Board, appearing at the Commission's request, advised the Commission that based on their experience as the federal regulatory body regulating interprovincial pipelines, they could not agree with the Director's position. They advised the Commission that no formal or informal complaints with respect to access to pipelines had been made to the NEB prior to 1979.

The Director's allegations regarding the discriminatory use of special streams and mixed blends when shipping crude oils through the IPL line and the associated issue of access to storage or "breakout" tankage, relate to highly technical aspects of pipeline operations over a period of many years and to numerous evidentiary documents, all of which are difficult to describe and analyze in a few paragraphs. However, evidence submitted by IPL and by Imperial Oil and not challenged by the Director in evidence or argument, persuades the Commission that parts of the Director's analysis appear to have been based on insufficient information about pipeline operations.

4. "The Sipco Affair"

Representatives of Sipco Oil Ltd., an independent marketer, testified that in 1979, a period of tight supply for both crude oil and petroleum products, both within Canada and internationally, it had experienced difficulties in gaining access to domestic crude oil and the necessary pipeline capacity for its transportation from Western Canada to Central Canada for processing.

The tight supply conditions of 1979 following the Iranian revolution, created attractive marketing opportunities for any marketer with product. The profitable opportunities led many marketers to seek above-normal volumes of supply from refiners and, in a few cases, led independents to seek processing agreements with refiners whereby they would try to obtain crude oil and transport it by pipeline to be refined on their account under a processing agreement. The evidence suggested that Société Nationale Elf Acquitaine (Elf), Pebec Inc., Norco Oil and Spur Oil in Quebec and Sipco

Oil in Ontario and Turbo Resources in Western Canada sought such arrangements.

In 1979 Sipco was advised by BP Canada that due to the tight supply conditions it could no longer supply product to Sipco. Mr. Nigel Turner of Sipco told the Commission that Sipco contacted the APMC in early 1980 seeking crude oil supply. Sipco was advised by the APMC that it was not an approved purchaser (not a refiner) and that Sipco, therefore, should make arrangements through a refiner who could obtain crude oil from the APMC. The APMC also suggested that Sipco seek to buy freehold crude oil (not controlled by the APMC) but in the tight supply conditions of the time, Sipco was unable to make such arrangements. According to Mr. Turner:

> Their position at that time was that they were only willing to deal with their designated customers and at that time Sipco was not a designated customer and unless we could make arrangements through a third party to buy crude they were not in a position to sell the Crown crude to us. They also suggested we go buy freehold crude which we tried to do without success. Their answer to us was that we were not a refiner and therefore we were not entitled to be a customer ... it was Alberta's regulation.

Sipco was able to overcome this hurdle with the help of representations to the APMC from the Government of Ontario and by entering into a processing agreement with BP (later Petro-Canada) by which the refiner would obtain crude oil from the APMC (up to 5,000 barrels per day) and process it on Sipco's behalf.[6]

Sipco experienced similar problems when it sought access to the Interprovincial pipeline system in order to have its Alberta crude oil transported to Central Canada.

> ... IPL was allocating the use of the pipeline to historical suppliers. So we were there with 3,000 barrels a day of crude but no historical position to have an allocation offered.

This difficulty was overcome following interventions by the National Energy Board and by IPL agreeing to provide Sipco with a capacity of 5,000 barrels per day in the line.

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[6] The APMC refused to supply crude oil to Petrosar during 1981 following consultation with Alberta Government representatives. That refusal was related to a political dispute between Alberta and the Federal Government. The evidence suggested that after 1980, the APMC continued to choose to supply non-refiners through refiners who then processed it on the former's account. However, even prior to the Western Accord of 1985, as supply exceeded demand, the APMC appears to have been willing to soften its earlier policy and to supply non-refiners directly.

Similar potential pipeline problems for marketers west of Quebec were soon avoided by the completion of looping of the Lakehead section of the pipeline which provided sufficient capacity to meet all demand for pipeline access. In November 1979 the NEB established procedures under which it would effectively assign space to new shippers requiring crude oil in Quebec. Under that system feedstock allocations were granted to all of the independents mentioned above.

It appears to have been Sipco's experience with both the APMC and IPL that caused the Director, in his argument to the Commission, to assert that "uncertainty remains for independent resellers seeking access to pipelines when line space is limited", and that the APMC's policies "can be a significant barrier to entry in gaining access to crude . . . barriers to entry have been established by the APMC in preventing independent marketers from gaining access to crude."

5. The Commission's Conclusions

For the reasons set out earlier, the Commission did not conduct an extensive inquiry into either company conduct or government interventions in the domestic production and pipeline sectors. The evidence before the Commission, including the Green Book, however, failed to establish to the Commission's satisfaction that the allegations made by the Director in Volume IV of the Green Book against Interprovincial Pipe Line Limited, Imperial Oil and other petroleum companies operating in the production or pipeline sectors were justified.

In his Green Book remedial proposals the Director had called for greater regulation of pipelines and for modification of the policies of the APMC. Both are part of the reality of 1986. All aspects of pipeline operation, including tariffs, are regulated today. Imperial Oil no longer carries out the "equalization" calculations of concern to the Director. The APMC sells less than a third of the total light oil production in Alberta and must respond to market conditions like any other seller. Buyers have many sources of supply. Today, following deregulation, domestic crude oil prices are largely determined by competitive forces in the Chicago and Montreal markets where Canadian crude oils compete with foreign crude oil prices.

The Director's third remedial proposal in the Green Book called for the divestiture by integrated petroleum companies of their holdings in pipelines subject to federal jurisdiction. The need to implement this proposal was not supported by the evidence, nor was it repeated by the Director at the conclusion of the inquiry.

The Director's more recent concerns, as expressed in his argument, have as much or more to do with government regulatory programs as with company conduct. The Commission shares his view that public policy decision-makers need to give full attention to the possible effects on competition of the various policy alternatives before them.

The evidence before the Commission does not establish any need for *additional* governmental interventions or other remedial steps designed to promote competition in the production or pipeline sectors. Government control over crude oil facilities and production for reasons of conservation and to protect the property rights of producers is possible without prorationing to market demand. Furthermore, one of the reasons for prorationing, to protect non-integrated producers, may have lost its force as a result of access to U.S. markets.

The Commission agrees with the submission it received from the National Energy Board which stated:

> From the Board's vantage point, therefore, little need is seen for additional regulation or monitoring of oil pipeline operations. . . . At this time, however, it has no general suggestions to offer as to the way in which competition might best be fostered and ensured in the production and pipeline sector.

The Commission recognizes the potential importance to non-refiner marketers of access to crude oil supplies, transportation and perhaps storage capacity, and therefore can appreciate the Director's expressions of concern. Nevertheless, evidence before the Commission suggests that potential difficulties are limited to relatively rare occasions of tight supply. Furthermore, the evidence suggests that the experience gained by all parties involved in the Sipco matter of 1979-1980, including the APMC, Interprovincial Pipe Line and the National Energy Board, is likely to facilitate easier access in the future.

Except for Sipco and Petrosar no one reported problems gaining access to domestic crude oil or pipeline capacity. Sipco's difficulties were short-lived and have not repeated themselves. Petrosar's problems arose out of a political dispute between governments. The NEB has not had any complaints about access to pipelines in recent years. In the unlikely event that such problems recur in the future, the Commission believes that the precedents established in 1979-80 suggest solutions will be found and that non-refiners will not be disadvantaged. In any event, the NEB regulatory authority is sufficient to prevent abuse of would-be entrants.

In the event that bottlenecks do arise under normal conditions, there are a number of channels open to those having difficulties obtaining crude oil supplies or pipeline capacity, including the NEB and the Combines Investigation Act. In times of severe shortage of supply, past experience suggests that federal and provincial ministers and departments as well as the Energy Supplies Allocation Board could be expected to intervene.

In the foregoing circumstances, the Commission has no specific remedial proposals to recommend to the Minister regarding the production or pipeline sectors.

IX

The Import of Crude Oil After 1973

1. The International Sector Since 1973

(a) Introduction

Beginning in late 1973, the international oil industry was subjected to revolutionary changes. The changes in the Canadian market for petroleum during the 1970s were no less profound. The structure and operations of the industry were altered so drastically that in many respects, the international and domestic industries described in the Director's Green Book no longer existed.

Internationally, the post-1973 period can itself be broken down into two phases — the first from 1973 until about 1981 and the second since then. The first phase was marked by large and numerous increases in the price of foreign crude oils, the domination of the international market by OPEC, the nationalization of production by producer-country governments with the subsequent change in the role of the multinational oil companies, periods of tight supply and increasing public anxiety about oil supplies, the establishment of more national oil companies, an increasing number of government-to-government deals, greater priority given to exploration in non-conventional/ high-cost areas and increasing government regulation in many consuming countries.

In 1960 the Organization of Petroleum Exporting Countries[1] was formed, largely through the efforts of Venezuela. Concerned with declining tax and royalty revenues, the major producing countries outside Europe and North America joined together to search for ways to improve their revenues.

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[1] OPEC has 13 member-countries — Algeria, Ecuador, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates (including Abu Dhabi), Venezuela and Gabon. Two-thirds of OPEC production is in the Middle East and is controlled by members of the Organization of Arab Petroleum Exporting Countries and Iran.

The growing dependency of many consuming countries, and particularly the United States, on crude oil from OPEC countries during the 1960s and early 1970s enabled OPEC governments to take increasing control of price and to set progressively higher posted prices in the early 1970s. At the same time, OPEC countries were increasing the level of tax and royalty assessments on production to increase further the revenue flowing to their treasuries. This increased "government take" was passed on to the purchaser in the form of higher petroleum prices.

Not only did host governments seek to increase prices, they also sought to gain ownership rights in the crude oil being produced. Through nationalization or "participation", an increasing volume of oil found its way into the producing governments' control. The most recent wave of nationalization started in Algeria in the early 1970s when Algeria nationalized all non-French oil companies' interests and acquired 51 per cent of French interests. Iraqi concessions were nationalized between 1972 and 1975.

In June 1973 the Government of Libya moved to achieve 51 per cent participation. Those who did not agree to 51 per cent participation had their interests nationalized outright. Iran too nationalized the foreign oil consortium operating within its borders in 1973. In January 1974 Kuwait took 60 per cent participation of the concessions controlled by the Kuwait Oil Company. In the case of Saudi Arabia, nationalization has been in de facto operation since the beginning of 1976 and the final agreement was signed in August 1980. Kuwait and Qatar completed the takeover of Persian Gulf concession areas in 1976 and 1977 respectively. In 1976, the petroleum companies in Venezuela were nationalized altogether. Mexico had nationalized its oil industry in 1938.

(b) The 1973 Crisis

There have been two international oil crises since 1973. The first took place following the Arab-Israeli war of October 1973 when most Arab exporters embargoed crude oil supplies to nations regarded as pro-Israel, principally the United States and the Netherlands. The second occurred during and after the Iranian revolution in 1978-79 when crude oil exports were suspended for several months, then only partially resumed.

The 1973 embargo led to much anxiety about security of oil supplies in the entire western world and the spot market price rose to as high as seventeen dollars a barrel by the end of 1973.[2] This triggered another round of price increases, so that when the embargo ended in March 1974, the price of crude oil had quadrupled.

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[2] All international crude oil prices in this Report, as in international transactions, are quoted in U.S. dollars.

Before describing the events of the late 1970s, it is important to note that the crises of 1973-1974 created major changes in the international oil industry. OPEC Governments took control of the sales of their oil and the traditional role of the oil companies and the traditional channels of trade underwent profound changes. The power to set prices and to control production levels moved from the oil companies to the OPEC Governments.

The years 1975 through 1978 were ones of relative stability. Economic growth in the industrialized nations slowed down and the demand for OPEC oil declined. OPEC was producing less oil in 1978 than in 1974 and production was taking place in the North Sea and Alaska. By 1977, as the world economy recovered from earlier price increases, crude oil prices, adjusted for inflation, had declined and consumer nation imports began to rise.

(c) The 1979 Crisis

In late 1978 the Shah of Iran was overthrown and Iranian crude oil exports were reduced. Oil prices then rose in 1979 as spot market prices rose above the OPEC price of around $13 (US) a barrel for Saudi light marker crude oil and the OPEC price moved towards the spot price. By mid-February 1979 Saudi Light was selling on the international spot market at about $25 per barrel, almost double the 1978 official price. The relentless spiral of oil prices continued through 1979, bringing the average official selling price within a year to roughly $30 per barrel.

The loss of Iranian production at the time of the Iranian revolution cut the supply of the international majors by nearly 3.5 million barrels a day, forcing them to shed third-party customers in order to maintain supplies to their own refineries. Reallocation was curtailed by the restrictive arrangements imposed by some national companies. At the same time, consumer panic increased demand for oil products and existing stocks rapidly shifted down the supply chain into secondary and tertiary storage as speculative hoarding increased. The actions of the importing countries created a sellers' market. Fears of a serious shortfall led to a wild scramble for oil as governments rushed to negotiate bilateral deals with individual exporting countries.

(d) The Pricing of Foreign Crude Oils During the 1970s

In the 1950s real crude oil prices fell an average of about 2½ per cent per year; in the 1960s the annual rate of decline accelerated to 4½ per cent; but during the 1970s real crude oil prices multiplied about 10 times for an average annual rate of increase of almost 30 per cent. During the early 1970s control of both pricing and production decisions passed to the producing governments. By 1975 the host governments had moved away from the posted price system to what is now called Official Selling Prices (OSP) or Official Government Selling Prices (OGSP). After 1974 the various OSP's were widely published. As a result, the international crude oil market became more transparent.

With the events in Iran in 1979, producers began to alter pricing practices and in the following years oil was sold in three primary categories: term contracts at official prices, term contracts at official prices plus a premium, and single cargoes or short-term sales at spot prices. By 1980, official prices varied more than could be justified by quality or transportation differentials. Official prices were generally charged for the "equity oil" of participating companies and for most government-to-government transactions. In the case of the latter, prices were usually at the official government selling price, well below the price of other direct deals which included a per barrel premium of as much as $11 per barrel. In many government deals the buyer had to agree to provide technological or other assistance. The price of crude oil in other term contracts, which totalled perhaps 30 per cent of OPEC's sales, was generally set at the official price plus a premium. The premiums could take many different forms. In early 1980, for example, Kuwait simply charged a $5.50 per barrel premium on quantities in excess of a basic volume for each purchaser; Iran required that purchasers of crude oil also buy fuel oil; Mexico required that buyers, including Canada's Petro-Canada, take heavy as well as light crude oil; and Algeria collected a $3.00 per barrel fee to finance exploration. Variations in such premiums were greater than official price differentials.

By 1980 the fairly rigid pattern of price relationships among crude oils of different quality had been largely swept away by the 1979 crisis and only its basic features remained. The spread of value between light, low-sulphur varieties and heavier, sulphurous crude oils had increased considerably, dictated by the increased spread in value of the petroleum products refined from these crude oils.

The weighted average price of all crude oil imported into the countries belonging to the International Energy Agency (IEA) increased to a peak of $36.60 U.S. (FOB) per barrel in March 1981, compared to about $14 U.S.

per barrel in December 1978. By September 1981, the price had declined by 7.1 per cent to $34 U.S. per barrel. Official selling prices fluctuated greatly during this period. Libyan and Nigerian crude oils sold for as much as $41 U.S. and $40 U.S. per barrel respectively in January 1981.

Official (OPEC) crude oil prices began to drop in March 1983. At that time OPEC succeeded in limiting the drop to $5 a barrel by restricting crude oil production. In 1983, 40 to 45 per cent of internationally traded crude oils were reported to be traded below the official price.[3] More recent changes in oil prices are described later in this chapter.

(e) Changing Roles of Oil Companies/Changing Channels of Sales

Prior to 1973-74, the seven international majors[4] and other participating companies not only produced OPEC's oil but also handled the distribution of more than 90 per cent of it. The companies received some of the oil through direct "equity" agreements or concession agreements giving the companies ownership of the oil they produced and obtained the rest through "buy-back", the purchase of oil produced by the companies on behalf of the host country. This volume exceeded the refining and marketing systems of the companies, making it possible for them to sell nearly seven million barrels per day to third-party customers. Less than 10 per cent of OPEC oil flowed outside the supply channels of the majors.

Nationalization and the other structural changes which occurred during the 1970s and described above, fundamentally altered the role of the petroleum companies in the international oil market. For the most part the companies no longer have equity positions in producing fields with the result that there has been a marked decline in the amount of "preference" or "equity" crude oil traded internationally. Often, the oil companies continued to operate production facilities because of their technical capabilities, but only as contractors under the ultimate direction of producing governments.

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[3] Oil trade flows are denominated in U.S. dollars. As a result, the effective prices to consuming countries may not move in the same direction as OPEC prices, or may change much more than them, depending on the course of the U.S. dollar. For example, the Paris-based International Energy Agency found that Japan, in effect, was saddled with an 8% oil price rise, and a group of European countries with a 9% increase in the second quarter of 1984, because their currencies fell by those amounts against the U.S. dollar while the official price of oil remained at $29 U.S.

[4] Exxon (Esso) or Standard Oil of New Jersey; Royal Dutch/Shell; Mobil; Gulf; Texaco; Standard Oil of California (Socal); and British Petroleum (BP).

While many continued to receive crude oil from their former concessions, it was not at production cost but at government established selling prices and often under rigidly defined purchase terms.

In 1973-74 the large oil companies sold about 6 million barrels per day of crude oil surplus to their needs in the third-party market. This part of the market was gradually taken over by the national oil companies in the producing countries. The companies' third-party markets shrank as the volume of bilateral and direct sales by governments increased.

Although the international oil industry lost control over a very large part of the world's producing territory between 1970 and 1978, it still handled much of the crude oil traded internationally. Instead of producing crude oil which it owned and paying royalties to host governments, to an increasing extent it bought oil from those governments. The means by which title to the oil passed into the hands of a company was different, but as far as petroleum and petroleum products sold by the majors were concerned, little had changed at the consuming end of the distribution chain, or indeed beyond the port of loading of the crude oil.

The initial loss of 5.5 million barrels per day in Iranian exports in 1979 cut the daily supply to the seven largest majors by about 3.5 million barrels. Because of this loss and the ensuing logistic disruptions, the majors reduced third-party sales (which had amounted to about 4.5 million barrels per day just prior to the crisis) and sharing arrangements between companies began to break down. When Iranian production resumed, the majors regained less than one million barrels per day of supply; instead, Iran began to sell directly to consumers, some of whom had been cut by the majors and most of whom were motivated by serious security concerns. The consumer scramble for oil spread, allowing other producers to take greater control of their oil. Kuwait, Iraq, Venezuela and other producers cut equity and buy-back volumes for many companies, and Nigeria nationalized British Petroleum assets in that country.

The national oil companies of the producing country governments increasingly sold the oil formerly acquired by the majors and other participating companies directly to other oil companies, to consumer governments or their agents, or on the spot market. Direct sales increased to nearly 45 per cent of the producers' total volume and resulted in significant structural changes in the world oil market. Many majors were now short of crude oil. The large companies have gone from being net sellers of crude oil in 1973 to being net purchasers of crude oil.

Oil companies reduced sales into the third-party market as they lost preferred access to supplies because the remaining crude oil available to them was needed to sustain their own operations. Companies with established refining, marketing and distribution systems lost their historic direct access to supplies and, therefore, had to compete increasingly in third party markets with others in similar situations. Between 1973 and 1980, the volume of crude oil sold in the third-party market by private companies declined substantially, from 7 million barrels per day to 2 million barrels per day. Over the same period, sales into the third-party market by producing governments increased sharply by more than 9 million barrels per day. As a percentage of the third-party market, sales by all companies declined from 74 per cent to 15 per cent, while those by governments increased from 26 per cent to 85 per cent.

(f) The Changing Spot Market

In the scramble to rearrange crude oil supplies following the disruptions caused by the events in Iran, producers found that they were able to sell large volumes of crude oil on a spot cargo basis at high prices. In mid-1980, the sellers of spot oil were primarily producing governments and non-affiliated traders. Previously, the spot crude oil market had involved relatively small quantities of oil sold by middlemen in Rotterdam, Singapore or elsewhere. Partly because the bulk of crude oil moved within integrated companies, spot sales were basically a mechanism for detailed balancing of supply and demand. Producers created an essentially new spot market in 1979, a market of greater size and with a different role in the oil market system.

The 1.2 million barrels per day moving on the spot market in the summer of 1980 represented 9 per cent of the third-party-market. There are reports of single cargoes changing hands many times. In spite of the difficulties retrading creates for estimating the volume of spot sales, expert opinion is agreed that spot sales grew considerably during the late 1970s and early 1980s. (Canada's Suncor, for example, bought all its foreign crude oil requirements on the international spot market after 1976.) It has been estimated that up to 30-40 per cent of oil sold to the final user in 1984 was spot oil. Furthermore, more and more term deals are struck in relation to the spot price prevailing at the time of the deal using price-adjustment formulae that allow changes in price during the life of the arrangement.[5]

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5. The more recent development of a futures market for oil is described later in this chapter. It is not relevant to the examination of the Director's allegations and evidence.

(g) Responses of Consuming Countries

The oil supply crises of 1973 and 1979 generated two concerns in consuming countries — 1) continuity of supply and 2) the price that consuming countries would have to pay to obtain oil and its effect on their economies.

Even before the oil crisis of 1973-74, some consuming country governments were becoming increasingly involved in the international oil industry. Prior to 1973-74, countries such as Finland, France, Italy, Austria, Spain, Norway and Britain, all increased the role of governments through the establishment of state-owned oil enterprises. Italian, Spanish and Austrian national oil companies were responsible for importing all or part of the oil consumed in those countries. In other cases such as Japan, governments adopted policies of persuasion, supervision and control vis-à-vis the international companies as a means of achieving national objectives.

In 1973-74 and again in 1979, the governments of the main importing countries attempted political responses to OPEC's initiatives. The OECD governments, with the main exception of France, decided for the first time in 1974, to take joint action by setting up the International Energy Agency. This 21-nation organization set about preparing plans to counter any future shortfall of supplies by devising an oil-sharing scheme, agreeing to hold (individually) minimum stocks, encouraging the search for oil outside OPEC countries, and fostering the development of alternative forms of energy. During the past decade consuming country governments have sought to moderate energy demand growth and to develop not only new sources for petroleum supplies but also new sources of energy. In Canada, concern over security of supply found expression in the Federal Government's 1976 document, *An Energy Strategy for Canada, Policies for Self-reliance*. The result has been a marked decline in the volume of crude oils used by consuming countries and a surplus of capacity in the hands of petroleum companies and producing country governments.

(h) Government-to-Government Deals

Government-to-government deals involving oil supply sprouted in the aftermath of the 1973-74 crisis, reflecting mainly the desire of consuming countries for a greater security of oil supply and the growing desire of producing countries to sell their oil directly rather than through foreign companies.

Because governments of consuming countries no longer had the same degree of confidence in traditional suppliers, they established or directed state-controlled oil companies to go directly to the governments or state companies of producing countries in a quest for long-term (if possible) sales contracts. The result was an increase in government-to-government agreements covering the provision of crude oils often as part of a larger trade agreement between the two countries. Under such agreements the crude oil was priced at the Official Government Selling Price of the producer country. Payment sometimes took the form of goods and services. Canada signed an agreement with Mexico in 1980 which provided for the supply of 50,000 barrels per day of Mexican crude oils to Canada.

Between 1973 and mid-1980, government-to-government deals increased from 1.5 million barrels per day to 8.6 million barrels per day, representing 34 per cent of free world, internationally traded crude oil. By 1980 the national oil company of Saudi Arabia, Petromin, was selling crude oil directly to the governments (or their agents) of Argentina, Austria, Brazil, Belgium, Denmark, France, The Philippines, South Korea and Turkey.

Despite their growth and the attention focused on them in the late 1970s, government-to-government deals now seem to have levelled off at around one-third of internationally traded crude oil going to free-world, industrialized economies. The ten largest oil companies still "handle" more than 60 per cent of the free world's internationally traded crude oil but they own much less than that and are required to obtain most of their supplies from producing country governments. This is less true with the declining importance of OPEC members as supply sources.

(i) Restrictions

As direct sales to companies and to governments by the producer nations grew, the contracts increasingly included constraints on where or how the crude oil was to be used. These restrictions took a variety of forms including:

> System restrictions: requirements that oil be used only in the refining and distribution or home market of the purchaser.
>
> Resale restrictions: limits on third-party sales and exchanges between companies.
>
> Destination restrictions: for example, boycotts of Israel or South Africa, or refusal to allow shipment through the Suez Canal.
>
> Anti-competition clauses: requirements that buyers of crude oil not compete with the primary producer's direct sales. Such clauses further restrict third-party sales and the activities of traders and other intermediaries.

Mandatory purchases: requirements that a purchaser buy petroleum products or lower quality crude oil, often at high prices, to ensure access to its usual crude supply.

Transportation restrictions: requirements that crude oil be transported in tankers owned by producer interests.

For example, Petro-Canada entered into a one year contract with Venezuela in October 1981 for the supply of crude oil. A Petro-Canada witness told the Commission that the contract prohibited Petro-Canada from reselling the oil outside of Canada and that it was his belief that "there are destination restrictions in almost every modern contract from national supplying companies". The selling price was the Venezuelan OSP and the witness told the Commission that he believed that no one could have obtained Venezuelan oil at prices below the OSP. Venezuelan authorities "exerted a lot of pressure" to have the oil transported in Venezuelan vessels but Petro-Canada was able to resist, arguing that its mandate from the Canadian Government required it to use Canadian vessels.

(j) Changes Since 1981

Recent years have been characterized by a shift in world oil supplies as between OPEC and non-OPEC areas, plentiful crude oil supplies, falling world prices, an increasing proportion of oil being traded on the spot market, the entry of producer governments into the downstream areas of the industry, reduced regulation of costs or prices in consuming countries, and a marked reduction in the quantities demanded of crude oil and of petroleum products.

Free world oil consumption, after rising throughout most of the 1970s, has fallen by over 11 per cent since 1979 and 17 per cent since 1973. OPEC's role in the world oil market has eroded considerably. There are now 73 oil-producing countries in the world. Of these only 13 are OPEC members. OPEC crude oil production fell by over 45 per cent between 1979 and 1985. Non-OPEC oil supply grew by over 10 million barrels per day or 62 per cent during the past 10 years. Today OPEC members control less than 30 per cent of the world's oil production with much of the internationally traded oil coming from such non-OPEC producers as Mexico, the U.K., Norway, Egypt, India, Brazil, Malaysia and China.[6]

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[6] An important and influential source of crude oil on the international market is the Soviet Union. The softening of international crude oil prices during the latter half of 1984 is reported to have begun with the Soviet Union offering "temporary" price discounts of $1.50 a barrel for Soviet crude oil.

The sharp reduction in oil demand has yielded surplus production capacity and weakened the ability of key producers to maintain prices. Most forecasts suggest that the demand for oil will grow very slowly, leaving surplus production capacity for another decade. In recent years, with no one to administer prices effectively and with lower levels of stocks, oil prices began to fluctuate over a very wide range in response to changing expectations about the future course of oil prices. Today OPEC has only a ceiling on production, and no really effective means of policing it. It is the market which determines the prices of crude oils. No single group of companies or countries has sufficient power to administer the market, as evidenced by the sharp fall in world crude oil prices in recent months.

Although crude oil supplies at present look plentiful, western economies will not be able to manage without OPEC oil for the rest of this century. It appears that oil will continue to be the dominant primary energy source well into the 21st century. Moreover, the average barrel produced is becoming increasingly heavy and high in sulphur content while the average barrel demanded is shifting towards the light, low sulphur type.

The shifts of power in the international oil industry to a wider group of companies and governments is continuing. The international industry today consists of an even greater mixture of publicly and privately owned companies. The rise of national oil companies, the growth of a large trading sector, and the decontrol of the U.S. and Canadian markets have all combined to return oil pricing to the market place.

It has been estimated that at least one-half of the world's oil still changes hands under term contracts, but contracts which offer greater flexibility than in the past. It is believed that most sales from the North Sea, Saudi Arabia, Venezuela, Mexico and Indonesia fall into this category. However "term" is now measured in months and even weeks rather than years. Virtually all contracts today allow for price adjustment on a daily, weekly or monthly basis. Participants are increasingly reluctant to enter into fixed price contracts.

Reports suggest that between one-third and one-half of total oil transactions are currently spot transactions. The development of the spot and future markets, which instantly respond to short-run supply and demand as well as to long-run forces, and the increasing proportion of spot trading in world oil markets has weakened the structure of official sales prices. Often the other party to a barter deal cannot use the oil himself; he must sell it and discounts are needed to attract a buyer.

There has been an explosive growth of oil futures markets in New York and, to a lesser extent, in London. Futures trading has grown to nearly thirty million barrels per day. Oil futures have already begun to play a major role in the pricing of crude oils. Even the major companies and national oil companies have started to use futures prices, not only as a reference, but increasingly as the contractual basis for pricing.

In recent years several OPEC countries have been producing more oil than OPEC officially allows. Most members have found a way of cutting prices unofficially through spot sales. OPEC countries are increasingly selling refined oil products instead of crude oil, sales that are not subject to the quota and price system regulating crude oil prices. Refined product sales now account for about 20 per cent of OPEC exports. A third circumvention of the official price structure comes when OPEC states use oil to pay for goods or to settle debts. This trading is mostly done below official OPEC prices. Saudi Arabian exports dropped to their lowest level in 18 years in early 1985 because buyers were opting for cheaper crude oils from OPEC members offering unauthorized discounts.

Official crude oil prices have come down dramatically since their peak at about $34-$35 dollars per barrel in 1981. On March 14, 1983 OPEC reduced the official price of Arabian Light, the marker crude, from $34 to $29 per barrel, a drop of 20 per cent in real terms.[7] During 1984-1985 spot prices showed a persistent discount from official prices.

In March 1986 Mexico's Pemex was selling its oil at an average price of $15.04 (U.S.). Venezuela recently announced it was abandoning official prices for its oil. Spot prices for light crude oils, which reached close to $40 US per barrel in 1980 recently have fallen as low as $12.00 a barrel. Although many forecasters do not see any overall increase in nominal oil prices through to the end of this decade, significant short-and medium-term price fluctuations are anticipated.

2. The Canadian Industry and Markets

(a) Introduction

Eastern Canada continues to be dependent on the international petroleum market. Canada is currently importing more than 20 per cent of its total crude oil requirements or about 300,000 barrels per day. The export (U.S.) market is no less important to Western Canadian producers with more than 200,000 barrels of light crude oils being exported daily as of April, 1986.

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[7] The reduction in OPEC's marker prices from $34 to $29 dollars in March 1983 was not all passed on to consumers largely due to the subsequent 26 per cent rise in the U.S. dollar rate.

After peaking in the 1973 to 1975 period at about 900,000 barrels per day, Canadian crude oil imports fell to just under 300,000 barrels per day in 1983-84. This change reflected the decline in oil use, the growing surplus of domestic crude oil and the Federal Government's efforts to employ the regulated pricing regime to promote the utilization of western crude in eastern Canadian refineries.

The mix of products demanded by Canadians has changed, with demands for heavy fuel oil and heating oil together accounting for only 20 per cent of the barrel versus 40 per cent a decade ago. As Canadian consumers continue to move away from oil to other fuels, the quality of the overall demand barrel will be lighter than at present. Although domestic light crude oil productive capacity has not declined as anticipated only a few years ago, the average quality of domestic crude oil availabilities to the Canadian refining system is declining. The average Canadian barrel produced has become increasingly heavy and high in sulphur content while the average barrel demanded has been shifting towards the light, low sulphur type. For the next several years Eastern Canada will need to import light, sweet crude oils. The types of light crude oil that Eastern Canada will be needing are not evenly distributed among the oil producing regions of the world.

The sources of Canadian oil imports have altered dramatically in recent years. While in the mid-1970s imports from the Middle East accounted for almost two-thirds of total crude oil imports, they have now been almost entirely displaced by imports from Africa, (Algeria, Libya, Nigeria) the North Sea, Venezuela and Mexico. OPEC now accounts for 60 per cent of Canadian offshore crude oil supplies versus over 90 per cent in the 1970s.

Canadian import and export levels continue to be monitored closely. Although the Federal Government's Oil Import Compensation Program (OICP) has been dismantled with the recent deregulation of crude oil prices, the Commission has been advised by the Department of Energy, Mines and Resources that it has requested, and the companies have agreed, that EMR will continue to receive much of the same types of information regarding crude oil volumes and costs in the future as it did under the OICP. Such data will enable the Department to monitor the international crude oil market of the future more closely than was the case prior to the OPEC crisis of 1973.

Canadian exports of light crude oil, largely to U.S. markets, which were terminated in 1980, started again in 1983 and in 1985 averaged about 200,000 barrels per day. Heavy crude oil exports, which in 1980 were less than 100,000 barrels per day, have almost tripled to 270,000 barrels per day to meet demands for asphalt used to repair and upgrade U.S. highways.

Canadian oil product exports have increased by about 40 per cent over the past few years as refiners have attempted to more fully utilize spare capacity. These exports too have largely concentrated on U.S. markets. The net impact of these trends is that Canada has become a substantial net exporter of crude oil and oil products.

With the Western Accord and the decontrol of domestic crude oil prices, there are now no protected markets for domestic crude oil or oil products. With deregulation, Canadian crude prices have had to be competitive with U.S. (Chicago) and competing international crude oils at Montreal. Similarly, Canadian product prices are having to compete both in the American export market and in the Canadian market.

(b) Government Interventions

The most profound change in the Canadian market during the past decade was the increasing amount of government intervention and regulation. New measures were introduced with the apparent shortfall of world crude oil supply and the accompanying sharp upward swing in global oil prices in the early 1970s. Energy security, or "independence from the world oil market", became a central theme of government policies for the subsequent decade. Concrete government initiatives included: 1) the restriction of crude oil exports to the United States and construction of the Sarnia to Montreal pipeline to transport formerly exported western domestic crude oil to the import-dependent refining industry east of the Ottawa Valley; 2) the creation of Petro-Canada thereby providing government with a presence in the industry, including the oil importing sphere; 3) Canadian participation in the International Energy Agency's emergency oil sharing system; 4) the Government's expressed desire to have Canadian importers develop direct deals with suppliers for the acquisition of their foreign crude oil requirements; and 5) government programs designed to encourage conservation of petroleum supplies and to encourage greater domestic exploration and production. Another series of government programs or interventions were introduced to regulate petroleum prices so as to "cushion" Canadians from escalating world prices.

Our principal purpose here is to give the reader an idea of the degree to which petroleum imports and exports were regulated and monitored by federal government agencies after 1973 and to focus on particular federal government interventions which gave rise to criticisms and expressions of concern in the course of these section 47 proceedings.

(c) Changes to the Canadian Market 1973 – 1978

By 1973 U.S. crude oil production was declining at a time when the demand for petroleum products was continuing to increase. As the worldwide demand for petroleum escalated so did the demand for Canadian oil. Early in the spring of 1973 our exports to the United States totalled 1.2 million barrels a day, almost double the rate of the previous year. As a result, several Canadian refiners who did not have sufficient domestic production to meet their own supply requirements ran into difficulty. The Government responded by introducing export controls on Canadian oil in March 1973.

When OPEC oil prices began escalating during the latter half of 1973, both Ottawa and Washington decided to freeze their domestic crude oil prices in order to protect consumers and to prevent the oil industry from reaping the windfall gains resulting from the rise in the value of domestic oil.

In September 1973 Ottawa imposed a five-month price freeze on crude oil at $3.80 per barrel. At that time, control of pricing passed from the industry to government where it resided until the spring of 1985. Price increases were set by inter-governmental agreement in March 1974 and at regular intervals thereafter.

In January 1974 Parliament passed the Energy Supplies Emergency Act which established a system to provide for the distribution within Canada of domestic supplies of petroleum and petroleum products should a crisis make this necessary. The Act established the Energy Supplies Allocation Board (ESAB) and gave it the authority to allocate crude oil and petroleum products, including rationing if necessary, and the regulation of imports and exports. Although international turbulence created some threatening situations it was never necessary for the Board to use its emergency powers.

The Energy Administration Act, originally called the Petroleum Administration Act, passed by Parliament in June 1975, but having retroactive application, allowed the Minister of Energy, Mines and Resources to enter into agreements with producing provinces to fix the wellhead price of crude oil or, failing agreement, allowed the Government to fix the price unilaterally. As a result, both the domestic and the export prices of Canadian crude oil were established for all practical purposes by the Government of Canada alone or jointly until the Western Accord of 1985.

Domestic crude oil price controls prevented western producers from charging world oil prices for supplies shipped to other provinces. The control of the price of domestic crude oil was but one part of a set of controls. A two-price system for Canadian crude oil was established by means of the Oil Export Tax Act. This imposed a tax on crude oil exports from Canada as of October 1, 1973 and had the effect of aligning Canadian *export* prices with those of the OPEC countries. It also permitted the Government, rather than the oil companies, to reap the difference between the frozen Canadian price and that prevailing in the export market. The export tax meant that Canadian wellhead prices could not be increased and still be competitive in the export market without government concurrence and an appropriate adjustment in the export tax.

When the world price of crude oil began its dramatic climb in 1973, the Canadian Government was faced with the problem that its commitment to insulate consumers from the impact of rising world prices would work only in that part of Canada served by domestic production. The difference developing between controlled crude oil prices in Western Canada and the rapidly escalating world prices affecting Eastern Canada was enormous. The Government accordingly decided to subsidize the cost of imported crude oil. Had it not done so, the rising costs of world market crude oil would have been borne exclusively by the people of Quebec, the Maritimes and Newfoundland.

The Federal Government also announced that it was prepared to provide compensation to importers of crude oil and products effective January 1, 1974 in order to place refiners and thus consumers across the country in an equivalent position. The export tax helped generate revenue to offset the subsidy payments made to eastern Canadian importers of crude oil. Subsequently the Petroleum Administration Act imposed a charge, ultimately paid by Canadian consumers, on imported and domestic oil to help raise revenues to pay import compensation.

The subsidization was carried out under the Oil Import Compensation Program (OICP) established in April 1974, retroactive to January 1974, and described more fully below. The Department of Energy, Mines and Resources established and administered the program for six months after which it was assigned to the Energy Supplies Allocation Board (ESAB), later renamed the Petroleum Compensation Board (PCB).

As a result of the OICP (and the American Entitlements Program[8]) the average crude oil acquisition costs of Canadian and U.S. refiners remained substantially below the acquisition costs of their European and Japanese counterparts. Both governments took steps to ensure that domestic product prices reflected these lower costs through product price control systems in place after 1973. However, with the softening of world crude oil prices in recent years the levies and charges imposed by the Government brought the price to the Canadian consumer considerably closer to world prices.

(d) Petroleum Product Prices Controlled

Regulation of petroleum product prices by the Federal Government took several forms.

The Government of Canada issued price guidelines for petroleum products between September 1973 and October 1975. It acquired the means to regulate petroleum product prices in Eastern Canada, dependent on imported oil, by making conformity to its product pricing guidelines a condition for eligibility for compensation under the OICP as provided for under the Petroleum Administration Act. Compensation payments were available only to importers who "voluntarily" maintained the level of prices for petroleum products obtained from imported petroleum at a level satisfactory to the Government of Canada.

No formal federal authority existed to require conformity with the price guidelines in those parts of Canada served by domestic crude oil. Nevertheless, the majors, with retail outlets in both Eastern and Western Canada complied with the guidelines across the country and reported their prices for all regions to the Government.

Initially, the guidelines related to gasoline, automotive diesel fuel, and home heating oil. In January 1974 the Government extended its guidelines to all products both east and west of the Ottawa Valley. In June 1975 guidelines were promulgated requiring that any product price increases had to be demonstrated as attributable to increased operating costs. The only crude oil price increases which were allowed to be reflected in product prices were the periodic increases in the government-set wellhead price of western Canadian crude oil.

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[8] Although the objective in the two countries was the same, the methods of achieving it were different. In the United States, the Entitlements Program allocated the benefits of access to price-controlled crude to all refiners. The program allocated "entitlements" to refine price-controlled crude. The companies that had access to more price-controlled crude than they had entitlements were obliged to buy entitlements from companies that had access to less price controlled crude than they had entitlements.

These measures were continued after October 1975 as part of the Federal Government's Anti-inflation Program. Following the termination of wage and price controls in December 1978, the prices of petroleum products, like those of other items, were no longer determined by Government decree. The responsibility for the continued monitoring of petroleum product prices was returned to the Department of Energy, Mines and Resources. The Federal Government established an understanding with Canadian petroleum companies that each time the price of crude oil was increased according to the agreements between the Federal Government and the producing provinces, 60 days would elapse before an equivalent increase would be paid by the consumers of petroleum products — so as to avoid windfall inventory profits. The Government retained the controls over the price of interprovincial domestic oil flows and the industry's crude oil costs were still equalized by the OICP. Compliance with the Government's pricing guidelines as a condition of eligibility for import compensation was dropped in early 1979. Companies continued to feel obliged to notify the Federal Government about product price increases and to justify those increases in terms of higher crude oil and non-crude related costs.

(e) Other Developments After 1978

In November 1978 the Iranian revolution resulted in Canada losing a sizeable proportion of its import slate. Although the Canadian industry had the capability to increase domestic production, the required additional volume could not be moved to Montreal because of pipeline constraints. In January 1979, it was decided to achieve the equivalent of additional domestic crude oil in the east by increasing our exports to the United States in exchange for additional imports to replace the oil that was lost.

The Canada-Mexico crude oil agreement was signed in 1980. It provided Canada with 50,000 barrels of Mexican oil per day. Petro-Canada acted as the Canadian Government's agent. The Mexican crude oils (a lighter Isthmus and a heavier Mayan) were priced at Mexico's official selling prices. The Canadian Government required that each Canadian refiner (or reseller with a processing agreement) take a portion of the Mexican imports. Petro-

Canada was responsible for the importing and distribution of the Mexican oil and charged the other companies a 5¢/barrel agency fee.[9]

On October 28, 1980 Canada's National Energy Program (NEP) was announced. The NEP included a number of additional taxes or levies. The Oil Export Charge was to continue to reap the difference in price between domestic and export markets. The Petroleum Compensation Charge was to be used to finance imports, oil sands and enhanced recovery programs. The Canadian Ownership Special Charge was to be used to finance Petro-Canada's purchases of Canadian oil interests from foreign corporations.

At the same time, the Federal Government introduced The Oil Substitution and Conservation Program.[10] This "off-oil" program was designed to discourage the use of heating oils by subsidizing the costs of converting home and industrial heating plants from oil to alternative energy sources. Its impact on the industry is examined in Chapter XVIII.

In March 1981, in reaction to the NEP, the Alberta Government introduced a series of oil production cutbacks. The Federal Government imposed another special compensation charge to pay for the replacement imports. The impasse lasted until September 1981 when the Canada-Alberta Energy and Taxation Agreement was signed. However, instead of the forecasted 2-4 per cent per year increase in real terms, the world price fell from $44 to $36 per barrel.

By early 1982, although 268,000 b/d of crude oil was moving on the Sarnia to Montreal pipeline extension, some Alberta crude oil was "shut-in". In April 1982 the Federal Government announced two new policies to increase the use of Alberta crude oil in eastern Canadian refineries. First, transport costs from Montreal to Quebec and the Maritimes were to be subsidized (to a ceiling of the incremental costs of shipment through the Panama canal). Alternatively, exchanges with American refiners were to be subsidized where the American refiner took Alberta crude oil destined for the eastern Canadian refiner.

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[9] In 1981 and 1982 nominations for the Mexican crude oil were for less than 50,000 b/d and mandatory allocation was enforced. In all periods, refiners were allowed to trade this crude oil amongst themselves. Beginning in 1983 (as Mexican oil prices became relatively attractive), nominations for the Mexican crude oil exceeded availability and mandatory allocation dropped. Of the original users, Ultramar and Suncor dropped out; all other eastern refiners continued to take Mexican oil.

[10] Authorized by Parliament in 1981 as part of the Oil Substitution and Conservation Act.

Second, the Federal Government asked refiners to stop buying foreign crude oil on the international spot market and to use as much domestic crude oil as possible, consistent with existing term contractual obligations. The Government's program required importers to show all import contracts to the Government in order that the Government could determine the minimum volumes in these contracts consistent with continued supply. Only contracts which ensured long-term security were allowed; no new long-term contracts could be signed. Spot cargoes were penalized by a lower compensation rate of $50 per cubic metre.

3. The Oil Import Compensation Program[11]

The Oil Import Compensation Program (OICP) was alleged by the Director to have provided an incentive to crude oil importers to use more expensive crude oils. The specifics of this allegation and how it is addressed are discussed following a description of the OICP.

Because the Oil Import Compensation Program disappeared with the 1985 agreement between the Federal Government and the governments of the producing provinces to "decontrol" domestic crude oil prices, clearly there is no need for the Commission to report on its possible current (anti-competitive) effects or modifications to its operations in the future. Nevertheless, because the Director had alleged that the OICP, "involving as it did, billions of dollars of taxpayers monies", had had certain undesirable effects on the operation of the industry in the post-1974 period, (and because he had suggested that it be used as a remedial vehicle to promote competition in the import sector) the Commission concluded it did have a responsibility to examine the evidence regarding those allegations.

The OICP was designed to subsidize the difference between what an importer had paid for crude oil or petroleum products in November 1973 and the increased cost paid for cargoes imported on or after January 1, 1974. The objective of the program, as announced by the Minister of Energy, Mines and Resources, was that "all Canadians should pay the same basic price for crude oil aside from differences reflecting transportation costs in particular markets."

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[11] The Oil Import Compensation Program was originally established under the authority of the Energy Supplies Emergency Act of April, 1974 and later, under the Petroleum Administration Act passed on June 19, 1975. That legislation established the Energy Supply Allocation Board (renamed the Petroleum Compensation Board in April 1978) as the body responsible for the compensation program.

During the period January 1, 1974 to June 30, 1975, the free on board (FOB) compensation was based on *the lesser of* — (1) the FOB cost increases incurred by importers after November 30, 1973, or (2) the host government participation (HGP) and host government take (HGT) increases initiated after November 30, 1973. Compensation for increased transportation costs was based on increases in bunker costs incurred in the transportation of the petroleum to its port of entry into Canada.

Importers seeking compensation had to provide a great deal of specific information for each individual cargo of crude oil or product imported. A variety of invoice support, price verification and settlement dates was required and all data were subject to audit. All claims and supporting information were verified by companies' independent auditors. Ultimately, all financial transactions came under the scrutiny of the Auditor General for Canada.

While any possible increases in suppliers' profit margins would have been evident to oil import compensation program staff, it was of little consequence in terms of determining compensation, given that the HGT plus the HGP calculation would have imposed a ceiling on the amount of compensation payable.

EMR officials and former OICP staff acknowledged that the OICP in its original form had produced certain problems which led to changes effective July 1975. While the "cargo specific" or "cost change" compensation rate determination was effective in limiting payments to host government related cost increases and legitimate freight cost increases, there were some serious shortcomings which resulted in changes on June 30, 1975. The major shortcoming was that it did not ensure that the lowest priced crude oils found their way to Canada. Where certain crude oils had become relatively overpriced as a result of host government actions, that price disadvantage would have been eliminated for a Canadian importer by the HGT plus HGP compensation formula. Furthermore, with Venezuelan crude oils being relatively higher priced in the base period selected, they were effectively discriminated against throughout the entire period. In fact, a major shift occurred away from Venezuelan to Middle Eastern sourced crude oils.

Under the "flat rate compensation" regime introduced as of July 1, 1975, compensation was based on a flat dollar per barrel rate plus an exchange rate adjustment as prescribed in the regulations. (Petroleum product compensation is addressed in Chapter XI.) The rates of compensation applied uniformly to all compensable imports regardless of source, type or quality. The rate of compensation was determined by equating the cost of foreign crude oil delivered at Montreal by so-called "efficient importers" to the cost of equivalent Canadian crude oil delivered to Montreal. Initially, the OICP calculated the "efficient" import price by taking the weighted average of crude oils from Venezuela (one-third), Saudi Arabia (one-third) and Iran (one-third). Within a few months the determination of the flat rate compensation was altered somewhat to take into account various factors including the composition of Canadian imports, FOB costs, freight costs, the quality of crude oils imported and domestic crude oil costs.

Until April 1982, compensation rates were based on the difference between the forecasted average imported crude oil cost at Montreal for a month and the cost of equivalent quality Canadian crude oil also at Montreal. The average import cost at Montreal was forecasted by incorporating into a rolling three month average crude oil import slate, the most recent monthly prices as they became available.

In theory, "efficient costs" were defined as those costs at which one would expect arm's length buyers to purchase oil and arrange for affreightment. In practice, the "efficient importer" price for crude oil actually delivered to Canada was measured during most periods on the basis of OGSP. Transactions reported in several international publications such as Platt's Oilgram, Petroleum Intelligence Weekly and the Middle East Economic Survey, and "intelligence" gained from discussions with representatives in exporting nations were also taken into account. Costs actually incurred by Canadian importers were compared to those paid elsewhere in known market transactions and appropriate adjustments could be made when evaluating claims for compensation involving prices higher than OGSP's. These information sources would have been of increased importance to government officials when spot market prices fell below OGSP towards the beginning of 1982.

Until spot cargoes became a significant factor, spot purchases were not normally an important portion of Canadian receipts and their treatment under the OICP varied. In most cases the lower of OSP or the spot price would be accepted but in special situations, such as those that existed at the time of the domestic crude oil cutbacks initiated by the Alberta Government, higher prices were allowed.

By 1981, as international crude oil prices became more volatile, OICP officials found it increasingly difficult to maintain a formula which reliably anticipated actual imported crude oil prices. In recognition of these administrative problems and because of concerns expressed by importing companies that the three-month rolling average was not sufficiently responsive to changes in crude oil sourcing, the changing level of activity in the spot market or changing spot market prices, the compensation rates, as of

April 1, 1982, were established *after the fact*, based on actual loadings for the month for which they applied. All other aspects of the rate determination remained unchanged.

The Director expressed a number of concerns regarding the OICP, both in its original and reconstituted forms. All of these concerns reduce to the Director's claim that the OICP provided an inducement to the parents of Canadian importers to send higher priced crude oils to Canada and, as a corollary, that the Canadian subsidiaries were not given an incentive to seek out the least expensive, appropriate crude oils. This claim or allegation can best be considered along with the evaluation of import prices paid by Canadian firms, which the Director also alleged to be too high. If import prices were in fact too high compared to a third-party standard, the design and/or the administration of the OICP could have been at fault. This approach to evaluating the OICP is appropriate for the form that it was given in June 1975 because the rate of compensation after that date was tied to the average level of import prices. Any negative effects to the public interest of imports of crude oil coming in at "too high" prices would have been compounded by payments of higher-than-necessary import compensation. The Director's concern regarding the effects of the OICP is a very serious one and needed to be examined, even though his remedial proposals regarding this program had no relevance after the deregulation of domestic crude oil prices. Before turning to the discussion of the available evidence on import prices, it should be noted that the level of import prices relative to a third-party standard is not an appropriate test for the OICP prior to June 1975. The reason for this is that the level of compensation was not based on the prices paid, but on how much they or the HGT and HGP had risen from the base period established under the program. Officials would not have had any reason therefore, to be concerned about the level of prices since they, by themselves, did not affect the compensation that was paid out.

4. The Director's Allegations Regarding Crude Oil Imports Since 1973

Up to this point, the Commission's review of the evidence regarding the importation of foreign crude oils and products into Eastern Canada has focused on the period 1958-1973 and on the allegations concerning such imports as set out in Volume III of the Green Book and in the Director's final argument. However, the Director's allegations regarding the prices paid for imported crude oil did not stop with 1973 and the Green Book. Just as he alleged that the prices paid for imported crude oils between 1958 and 1973 were "excessive", so he alleged that imported crude oil prices continued to be "higher than necessary" in the decade following 1973. The evidence and arguments advanced by the Director were somewhat different from those put forward by him for the pre-1974 period because the markets had changed so much after 1973; nevertheless, his basic allegations concerning "excessive crude oil prices" continued and they related to the entire period 1958 to 1984. His basic submissions for the post-1973 period were as follows:

1) While Canadian companies were importing the "vast majority" of their foreign crude oils between 1974 and 1980 at the Official Government Selling Price (OGSP) level, the same crude oils were available on the international market at lower prices, that is, at prices below the OGSP level; and

2) The OGSP level of prices paid by Canadian importers included unacceptably high markups or profit margins and Canadian purchasers should have and could have obtained their foreign crude oils at more competitive prices.

The second point relates to reports that some international petroleum companies were able to obtain their crude oil at less than the OGSP. The petroleum companies whose parents were members of Aramco stated that to the extent that any such reports referred to Aramco, any revenue earned by Aramco was for expert services rendered. They also argued that the Director's point was irrelevant since it had nothing to do with third-party prices. The Commission agrees that the only relevant comparison for the prices paid by Canadian importers for crude oil purchased from affiliated companies is with the prices which they could have paid through careful shopping — i.e., third-party prices.

One of the major changes that occurred in both the producing countries and in the major consuming countries after 1973 was that governments became directly involved in setting and monitoring crude oil prices. Most of the crude oil traded in the international market after 1973 was reportedly bought and sold at the OGSP level; the OGSP prices were determined by producing country governments and widely publicized by those governments. The consuming countries had established the International Energy Agency in 1974 which collected and published the average imported crude oil costs of each of the member countries. The international crude oil market thereby became somewhat more transparent. In North America both the Canadian and American Governments required Canadian-based and American-based companies respectively, to report the prices they had paid for the crude oils they imported.

United States-based companies were required to report to the Department of Energy (DOE) the prices at which they were buying and selling individual crude oils on an arm's length basis anywhere in the world. The prices in these transactions were used to establish a third-party standard against which to evaluate transfer prices or prices charged in transactions between affiliated companies. That information has been used for the same purpose in this inquiry.

From late 1973 until the spring of 1985, all importers of foreign crude oils into Canada were required to report the prices they paid for each cargo of foreign crude oil to the Department of Energy, Mines and Resources (EMR) in order to receive the compensation available to them under the Oil Import Compensation Program (OICP). As a result, EMR has had a complete record of the prices paid for each cargo of crude oil imported into Canada during the past decade. Aside from certain reporting or recording errors or retroactive changes to prices reported initially due to changes in prices on the international crude oil market (particularly during the very volatile market of 1974), the OICP data provide an accurate summary of the prices paid for each cargo of crude oil imported into Canada between 1974 and May 1982.

The above reporting mechanisms, the OICP and the American DOE procedures, served as the principal sources of the evidence before the Commission concerning crude oil prices in the post-1973 period.[12]

The only other systematic evidence involved a comparison of imported weighted-average crude oil costs by country, published by the International Energy Agency. Witnesses from EMR said that they had used the IEA material to demonstrate that Canadian crude oil imports were among the lowest-priced crude oil imports in IEA member countries. The Director took issue with such an interpretation of the IEA data and argued that it was quite unreliable for such country-by-country comparisons.

Like much of the publicly available numerical data concerning the petroleum industry, the reliability of comparisons that one can make of imported crude oil prices between countries, based on the data published by the IEA, is open to debate. The IEA data did not play an important part in the Commission's deliberations; nevertheless, if nothing else, the data does not suggest that Canadian importers paid higher prices than the importers in most other countries for much of the foreign crude oil used in Canada.

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[12] Although there was some dispute, particularly initially, as to the accuracy of the OICP data, the majors, EMR and the Director agreed that most of the foreign crude oils imported into Canada between 1974 and 1979 were reported to have been purchased by the Canadian importing companies at the corresponding official government selling price in effect for each crude oil. Any exceptions do not materially affect the positions of the parties or the Commission's conclusions. Similarly, although considerable time had to be devoted to gaining an understanding of the precise nature of the DOE data, and although there was some initial dispute as to the accuracy, true meaning and reliability of the DOE data, the accuracy of the DOE figures themselves was not a significant point of dispute before the Commission.

The Director's conclusion that there was a large volume of crude oil available at less than the OGSP level is based on DOE price data for third-party transactions relating to Saudi Arabian Light and Iranian Light crude oils. Although these crude oils were not a large proportion of Canadian imports, they were widely traded internationally. For discussion purposes, a sample of the DOE data submitted by the Director is set out in Table 1.

The various prices referred to in Table 1 relate to the percentage of reported volume traded at or below the indicated percentile price. The tenth percentile price represents the price at or below which 10 per cent of the volume of crude oil in the reported arm's length transactions traded, and similarly for the other percentiles reported. The fiftieth percentile price is an important benchmark, with half of the volume trading below this level and the other half above it.

The DOE referred to the fiftieth percentile price as "the representative price". In evaluating prices in transactions between affiliates it also adopted a "maximum price" which it applied to at least part of the period when U.S. crude oil transactions were regulated. The "maximum price" was defined as the lower of the sixty-fifth percentile price or the fiftieth percentile price plus ten cents. The rationale behind the "maximum price" is that it is necessary to allow for dispersion of prices when evaluating a single or small number of transactions. This same approach has been taken by the Commission in all areas of comparison. Nevertheless, where available, the fiftieth percentile price is the appropriate standard, with the need to allow for dispersion decreasing with the number of observations.

The years 1974 to 1979 were marked by several increases in the OGSP level of prices for various crude oils. They sometimes occurred part way through a particular month. At times they represented retroactive price increases requiring retroactive adjustments in transaction prices and in prices reported to consuming country governments.[13] The Commission has excluded these price transition months for all comparison purposes since the date of the price change was not taken into account by the Director's representatives when calculating the percentage of volume trading below the OGSP. For example, if the OGSP for a particular crude oil was increased from $15.00 per barrel to $17.00 per barrel partway through a particular month, then any calculation or tabulation based on the claim that the OGSP for that crude oil

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[13] The early months of 1974 were particularly volatile and uncertain. It has been suggested that at that time companies did not know what they would end up paying for crude oils. Initial reports to the OICP reflected this volatility. Furthermore, it made 1974 a particularly difficult year to arrive at reliable crude oil price comparisons.

Table IX-1

Third-Party Transaction Price Information Reported to the U.S. Department of Energy (DOE) for Saudi Arabian Light Crude Oil in 1976

(U.S. dollars per barrel)

1976	Number of Trans-actions	10%* Price	50%* Price	90%* Price	% Trans. Below OGSP	% Volume of Crude Oil Sold Below OGSP**
January	99	11.48	11.51	11.64	32.3	34.7
February	110	11.46	11.51	11.63	31.8	33.0
March	135	11.47	11.49	11.53	56.3	63.4
April	101	11.48	11.49	11.59	55.4	65.1
May	110	11.48	11.50	11.55	48.1	51.3
June	130	11.47	11.49	11.76	50.7	58.1
July	101	11.48	11.49	11.77	48.5	57.0
August	111	11.47	11.50	11.55	46.8	54.3
September	105	11.48	11.49	11.56	49.5	55.7
October	129	11.48	11.51	11.77	23.2	25.7
November	95	11.48	11.51	11.77	24.2	22.4
December	112	11.48	11.51	11.80	18.7	22.2

* 10%, 50% and 90% of reported crude oil sales sold at the respective 10%, 50% and 90% prices or less.

** The OGSP in 1976 was $11.51.

Source: U.S. Department of Energy Depositing Form (FEA-F701-M), Schedule D. The last two columns are based on calculations by the Director's office in Exhibit I-79, Table XIV, p. 103.

for that month was $17.00 per barrel would erroneously suggest that a significant portion of that crude oil traded during that month at prices below the OGSP.

An examination of the DOE tables submitted by the Director for Saudi Arabian Light crude oil reveals that in the great majority of months between 1974 and 1979 the difference between the Director's "50 per cent price" and his "10 per cent price" ranged from only 2¢ to 4¢ per barrel on prices which ranged from approximately $8.00 per barrel to $25.00 per barrel. If one took a variation of plus or minus 5¢ from the per barrel OGSP, it would cover everything from the 10 percentile price to the 65 percentile price. This variation could easily be explained by adjustments for gravity or sulphur content or by rounding of final digits.

In comparing the OGSP and fiftieth percentile price of Saudi Arabian Light crude oil between 1975 and 1979, there were only 15 months when the OGSP was greater than the fiftieth percentile price (or, alternatively, when 50 per cent of the volume reported to DOE sold below the OGSP). This means that firms buying at the OGSP would, within the existing narrow price variations, compare favorably with the fiftieth percentile standard. As shown in Appendix F, Table 1, Irving Oil's prices were always above OGSP prices except for three months when there were substantial price changes.[14]

Since only imports at the OGSP level were typically accepted by the Petroleum Compensation Board, Irving's higher-than-OGSP-level prices would not have been averaged in with the other prices of imported crude oil and, therefore, would not have raised the amount of compensation paid to all companies. If Irving prices above OGSP were accepted, the impact would have been slight however, particularly since a large percentage of Irving's crude oil imports was excluded from the compensation determination calculations because that proportion of imported crude oil was used by Irving for product exports to the United States and elsewhere.

In the case of Iranian Light crude oil, more than 50 per cent of the volume traded below the OGSP in 38 of the 41 months for which data were available between 1975 and 1979. Therefore the prices paid by firms buying at the OGSP generally compared unfavorably with the fiftieth percentile price, the opposite of the situation for Saudi Arabian Light crude oil.

Canadian companies imported Iranian Light crude oil during a relatively short period. The prices on such purchases are shown in Table 2, where it can be seen that although the OGSP level of prices paid by Petrofina and BP were above the fiftieth percentile price, the amount of the differences was very small. The prices paid by Sun, Shell and Gulf were, on average, about equal to the fiftieth percentile price. Murphy's prices in 1976 were about 5¢ higher (except for one month when they were 6¢ lower). However, the prices paid by Ultramar and Irving Oil exceeded the DOE median representative price by 27¢ to 32¢ and 7¢ to 31¢ respectively in 1975. In 1976 Irving Oil's prices were 12¢ to 30¢ higher.

Venezuela was the largest source of foreign crude oil imported in Canada. There were (and are) a wide range of Venezuelan crude oils with respect to gravity and sulphur content. In preparing its summary tables for Venezuelan crude oils, the DOE grouped them into "medium" and "light" crude oils,

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[14] Appendix F, Table 1 provides a series of estimated net offshore prices derived by deducting from the Canadian import price the net income per barrel per year of the offshore subsidiary which acted as an intermediary between Irving Oil and SOCAL (the original crude oil supplier). Two sets of offshore prices (50 per cent and 100 per cent) are shown in Table 1 because it was unclear whether Irving Oil was to share the profits of the offshore subsidiary equally with SOCAL or keep all the benefits itself.

Table IX-2

FOB Prices of Iranian Light (34.0° to 34.9° API) Crude Oil Paid by Canadian Companies Compared to Third-Party Prices Reported to the U.S. Department of Energy (DOE) and the Official Government Selling Price (OGSP), 1975 and 1976
(U.S. dollars per barrel)

	DOE Third-Party Price Information				Canadian Import Prices							OGSP
1975	Number of Trans-actions	10%* Price	50%* Price	90%* Price	Ultramar	Irving Oil	BP	Petro-fina	Gulf	Sun	Shell	
January	n.a.	n.a.	10.68	n.a.	—	10.86	10.78	10.68	10.68	—	—	10.672
February	n.a.	n.a.	10.67	n.a.	—	10.74	—	10.68	10.68	—	—	10.672
March	n.a.	n.a.	10.68	n.a.	11.00	n.a.	10.68	10.68	10.68	10.67	—	10.672
April	n.a.	n.a.	10.60	n.a.	—	—	10.60	10.68	10.68	10.67	10.67	10.672
May	n.a.	n.a.	10.65	n.a.	10.92	—	10.60	10.68	10.46	10.67	—	10.672
June	n.a.	n.a.	10.64	n.a.	—	n.a.	10.64	10.68	10.68	—	10.67	10.672
July	n.a.	n.a.	10.62	n.a.	—	—	10.76	—	—	—	—	10.672
August	15	10.47	10.63	10.71	—	—	10.74	—	—	—	—	10.672
September	17	10.58	10.61	10.67	—	—	—	—	—	—	—	10.672
October*	31	11.41	11.53	11.93	—	11.84	11.62	11.63	—	—	—	11.620
November	24	11.47	11.59	11.65	—	11.86	11.62	11.63	—	—	—	11.620
December	23	11.54	11.56	11.62	—	11.78	11.62	11.63	—	11.63	—	11.620

	DOE Third-Party Price Information				Canadian Import Prices							OGSP
1976	Number of Trans-actions	10%* Price	50%* Price	90%* Price	Irving Oil	Petro-fina	Murphy	BP	Sun	Gulf	Shell	
January	31	11.52	11.56	11.66	11.78	11.63	—	11.62	—	11.56	—	11.620
February	24	11.30	11.56	11.62	—	11.62	—	11.62	11.50	11.56	—	11.620
March	35	11.52	11.56	11.61	11.86	11.62	—	11.62	11.61	11.55	—	11.620
April	24	11.54	11.57	11.63	11.69	—	—	11.61	—	—	—	11.620
May	32	11.54	11.59	11.78	—	11.60	—	11.62	11.61	11.56	—	11.620
June	43	11.54	11.58	11.65	—	—	11.63	11.60	11.64	11.56	11.60	11.620
July	32	11.54	11.55	11.63	—	—	—	—	—	—	—	11.620
August	42	11.54	11.56	11.77	—	—	11.63	—	11.54	—	—	11.620
September	35	11.54	11.56	11.65	11.84	—	11.63	—	—	—	—	11.620
October	33	11.54	11.57	12.45	11.77	—	—	—	—	—	—	11.620
November	53	11.54	11.62	12.17	—	—	11.56	—	—	—	—	11.620
December	46	11.54	11.59	12.27	11.73	—	—	—	—	—	—	11.620

Notes:

* Denotes a price transition month.

1. Net offshore price estimates were also available in 1975 for Irving Oil by deducting from the Canadian import price the net income per barrel of the offshore subsidiary. The Irving offshore prices were 2 to 10 cents below the OGSP for the 50 per cent offshore price and 23 to 40 cents below the OGSP for the 100 per cent offshore price (see Table 3 in Appendix F for the rationale for the 50 and 100 per cent offshore prices for Irving Oil). The 1975 price for Ultramar and the 1976 prices for Irving include a markup charged by an offshore affiliate trading company.
2. Texaco Prices in 1975 were estimated from CIF contract prices by the PCB (10.57 in February/March, 10.69 in June and 10.67 in July) but these prices are considered to be biased low because of the freight component used in the derivation of FOB prices.

Sources:

1. The DOE prices are from Exhibits I-79, I-83 and the U.S. Federal Register References cited in Appendix E.
2. The Canadian import prices are the Petroleum Compensation Board (PCB) Prices reported in Table 3 in Appendix F. These have not been adjusted for any variation from the sulphur content and 34.0° API standard used for the DOE price and the OGSP.

standardized for gravity and sulphur content. DOE data are available to the Commission for the period up to the end of 1976 and for 1979. This is less of a problem than first appears since Venezuela nationalized all petroleum company crude oil property at the beginning of 1976. After that date the Government of Venezuela was the sole seller, and prices became totally transparent until discounting by members of OPEC began in the early 1980s.

The prices paid by Gulf, Imperial Oil, Shell, Sun and BP in 1975 and 1976 are compared with the DOE fiftieth percentile price in Table 3. With respect to 1975, the majority of purchases for Ceuta and Tia Juana Light by Imperial Oil were clearly made at favorable prices relative to the DOE representative price while its prices for Guanipa were generally above the DOE price. Shell, which was buying under a long-term contract with a favorable price adjustment formula, paid particularly lower prices for Lagotreco and Lagomar. Gulf's prices for Oficina in early 1975 were below the DOE price, but its prices for Ceuta were generally higher throughout 1975. Sun's prices for Lagomar in early 1975 and BP's price for Lagotreco in late 1975 were below the DOE price. For 1976, the companies' prices were generally above the DOE median price standard, but the range was only 1¢ to 23¢.

The prices paid by Sun for Venezuelan crude oil during the first eight months of 1974 were much higher than DOE representative prices (or those paid by any other importers). Sun's import prices were subsequently reduced to levels approximately equal to those paid in third-party transactions. The high prices paid in 1974 were a continuation of the policy of Sun's parent over a number of years of charging high transfer prices. Contrary to the view expressed by the Director, the relatively high prices paid by Sun in 1974 did not affect the import compensation paid to Sun under the OICP. The compensation under the initial import compensation program was based on the *lesser* of FOB price increases or increases in host government take from benchmark levels, therefore any increases in FOB prices in excess of host government take would not result in increased compensation.

To summarize the results of the comparisons with the DOE data, there is no evidence that the payment of OGSP's (or lower in some cases) resulted in any prejudice to Canadian companies or in excess compensation payments under the OICP.

Although there is no systematic evidence of third-party term prices before the Commission after 1979, the available evidence strongly indicates that buyers who were paying OGSP did rather well throughout 1980 and for part of 1981. After the sharp increase in crude oil prices following the revolution in Iran, spot prices greatly exceeded OGSP and, according to reports, a

Table IX-3

Differences Between the FOB Prices* Paid by Canadian Companies and the Fiftieth Percentile or Median Third-Party FOB Prices Reported to the United States Department of Energy (DOE) for Venezuelan Light (34.0° to 34.9° API) Crude Oils, 1975 and 1976
(U.S. cents per barrel)

	GULF			IMPERIAL			SHELL		SUN	BP
	Ceuta	Oficina	Mesa	Ceuta	Guanipa	T.J. Light	Lago-treco	Lago-Mar	Lago-Mar	Lago-treco
1975										
Jan.	(49)	(75)		(41)	(41)	(64)	(108)	(110)		
Feb.	(14)	(42)		(10)	(7)	(37)	(69)	(67)	(45)	
March	16	(14)		(13)	21	(9)	(39)	(40)	(8)	
April	21	(9)		1	10	(29)	(32)	(39)	(13)	
May	18	(14)		(10)	1	(35)	(40)	(40)		
June	7			(11)	4	(36)	(43)	(41)		
July**	(5)			(4)	7	(29)	(28)	(32)		
Aug.	19			17	31	(7)	(15)	(18)		
Sept.	(5)			(6)	10	(30)	(40)	(36)		
Oct.	(7)			(27)	(12)	(42)	(43)	(42)		
Nov.	25		7	8	21	(6)	(9)	(5)		(48)
Dec.	15			(3)	20	(17)	(10)	(10)		
1976									Lago Medio	
Jan.	18				16	0	2	13		
Feb.	2				23	(8)	1	(2)		
March	13				18	2	10	10		
April	13				19	2	8	15		
May	0.4				7	(9)	(1)	11		
June	7				13	(4)	5	11		
July	11				16	1	9	7		
Aug.	11				17	2	2	7		
Sept.	11				18	2	2	5		
Oct.	(7)				(1)	(12)	(10)	(11)	5	
Nov.	5				4	(8)	(9)	8	19	
Dec.	(0.4)				(1)	(13)	(10)	(4)		

* Sulphur content was adjusted for by 7¢ for each full tenth of a per cent below 1.7 per cent and gravity was adjusted by 0.6¢ for each full tenth of a degree of API below 34°.

** Oil Import Compensation Program was changed in July 1975.

Note:

Differences were calculated by subtracting the DOE price from the Canadian company price reported to OICP. Differences in parentheses are those due to Canadian company prices being less than DOE median price.

number of countries demanded price premiums over OGSP or concessions in the form of technological or other assistance. This situation appears to have lasted for a year or so until signs of price weakness started to develop in 1981.

After crude oil prices began to fall in 1981 the OGSP level of prices generally rose above third-party prices. As spot prices began to lead intermittent reductions in the level of OGSP prices, there were reports of hidden concessions by members of OPEC. By this time several of the Canadian companies were not buying from their affiliates.[15] Although the price information which would allow conclusions to be drawn about the prices paid by other Canadian companies relative to third-party prices is not available, there is evidence that companies were responding to the availability of lower prices on the spot market by shifting their purchases in that direction. In fact, the Federal Government intervened from April 1982 onwards to discourage such purchases in order to protect sales of Canadian crude oil. An additional constraint was the requirement that companies purchase a share of the 50,000 barrels per day of Mexican crude oil contracted for by the Canadian Government through Petro-Canada.

5. Summary and Conclusions

1. The years following 1973 represent a period of varying market conditions. Until 1979 most crude oil was sold at OGSP under term contracts. There then followed a period of a year or so when, after allowing for various non-price concessions, term prices exceeded OGSP price levels. By the end of 1981, OGSP price levels appear to have generally become a poor guide to third-party prices as price and non-price (e.g. credit terms) concessions by sellers were frequently reported.

2. It is difficult to measure the volume of spot market sales to refiners. Nevertheless, there is wide acceptance of the view that spot sales have greatly increased in relative importance since the late 1970s, to the point where they account for in excess of one-third of volume. In the last few years trading in crude oil futures contracts has further added to the range and flexibility of crude oil transactions.

3. The available information shows that after 1973, with a few exceptions, Canadian companies paid OGSP until the early 1980s. These prices were equal to or lower than those paid, on average, in third-party transactions. The Director's concern that the petroleum companies

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[15] The shortage of Canadian crude oil in 1981 resulting from the Alberta Government's production cutbacks forced the companies with refineries in Quebec and Atlantic Canada to make up the shortfall by purchasing spot cargoes. The OICP provided them with special compensation for the higher prices paid; the spot import prices of these cargoes were not included in the compensation determination calculations.

continued to pay more than third-party prices after 1973, and that as a consequence there were excessive payments under the Oil Import Compensation Program, is clearly not supported by the evidence.

4. The price information that would allow conclusions to be drawn about the prices paid by Canadian companies relative to third-party prices after 1981 was not available to the Commission. However, there is evidence that companies were responding to lower prices on the spot market by increasing their spot purchases.

X

The Refining Sector

1. The Issues

The Commission's statutory mandate, which is to inquire into the existence and effect of conditions or practices related to monopolistic situations or restraint of trade and to appraise their effect on the public interest, may be generally paraphrased for the purposes of this chapter as follows: can reasonable steps be taken to improve the operation of market forces among refiners?

During the Commission's hearings one refiner submitted that the Commission ought to confine itself to asking whether there were agreements between or among refiners that had the purpose and effect of restricting competition and raising prices. This comes very close to suggesting that the Commission in a section 47 inquiry ought to determine whether or not criminal offences occurred, something that would be quite inappropriate and potentially unfair in view of the nature of the issues and evidence in such an inquiry. While in a general sense perhaps part of the Commission's task, it is much narrower than the duty imposed on the Commission by sections 47 and 19(2) of the Act.

With the refining sector, as with other sectors, the Commission has sought to understand its principal characteristics and to evaluate the types of conduct and agreements that are common in the industry. The industry background is particularly important in the refining sector, which might well be considered the hub of the petroleum industry. The Commission has sought to identify the nature and causes of inhibitions or restraints on the operation of market forces, restraints which if allowed to persist, might prevent or inhibit competitors or potential competitors with superior offerings, such as better prices, from competing away the business of others.

In order to identify restraints and to gain some appreciation of their market effects the Commission relies, in part, on complaints by persons who may feel prejudiced by the way the industry in fact operates. It is not sufficient, however, to rely solely on such evidence. Someone whose initiative may have been inhibited may not wish to testify or may not have viewed the problem as resulting from any deficiency in the way the market operated. Persons who benefit from a restraint, on the other hand, cannot be expected to complain about it. Accordingly, and also because it is useful when dealing with market conduct that does not have clearly predictable effects, the Commission also examined broader economic indicators of the strength of competition to see if they suggested the existence of any significant inhibition of market forces. Such indicators can be of particular importance in evaluating recommendations which would lead to fundamental changes in an industry's structure or in the way things are done in the industry. It is perhaps in this light that the allegation of $12 billion in higher costs (discussed in Part B of this report) was made by the Director, as a form of implicit support for a number of far-reaching recommendations in the Green Book. In any event, the broad indicators are indirect tests of whether there are important impediments to the operation of market forces. The broad indicators are not conclusive but their importance was reflected in the attention they received, with varying emphasis, from the Director and the refiners alike. For example:

1. To what extent have a small number of firms accounted, over time, for a large portion of industry output, and have the same large firms retained their respective market shares or rank positions over long periods of time? Low "concentration" levels or declining concentration over time are indicators of competition. Relatively high concentration or an absence of significant change over time, on the other hand, would not by itself mean that unjustifiable restraints did exist, because high concentration or stability in the data might be attributable to economic imperatives in the industry or to sustained superior performance, but at least a closer scrutiny of the reasons for the stability would be called for. Questions might then be asked as to whether unjustifiable barriers or restraints are inhibiting change, and whether potential entrants exist.

   Another concern that arises with high concentration levels, particularly in industries with products as homogeneous as petroleum products, is that the fewer the firms who are reasonably able to introduce changes, the more likely it is that their shared interest in maximizing profits will result in tacit understandings among them, or in a competitively interdependent similarity of practices, that will inhibit new investment, obstruct change and reduce the effective choices available to buyers. Accordingly, other things being equal (an important qualification), there is a public interest in diminishing high concentration levels and reducing oligopolistic interdependence.

2. What is the nature of refinery investment and costs? What has been the history of entry into and exit from the industry, and what changes have

occurred in patterns of industry investment? What is the history of excess capacity in the industry?

In assessing these matters it is particularly important to understand in general terms the nature of refinery investment including its magnitude, the role of changing technology, the planning horizons and expected lifetime for capital investment, the degree of ease or difficulty with which a refinery can be adjusted to meet changing characteristics of demand, economies of scale and the extent to which sunk (non-recoverable) costs raise the cost of exit and, accordingly, the risk and cost of entry.

The evidence regarding entry into and exit from the industry and the response of supply to changing demand, particularly as indicated by the level of capacity utilization, are also important when considering supply agreements between refiners, referred to and explained further in section 4 of this chapter.

The Director's basic thesis regarding the refining sector as set out in his Green Book was that the majors possessed "joint market power" in the refining sector which they used to restrain competition in the marketing sector. He further asserted that the alleged joint market power resulted from three things, namely, a high level of concentration in refining, "monopoly power" both upstream and downstream from refining, and a comprehensive "network" or "pattern" of product supply agreements between refiners.

The Director submitted that the number and nature of supply agreements between refiners facilitated cooperative or parallel behavior among them regarding supply to and practices in the marketing sector. In his view "monopolistic conditions in [the refining] sector arose from the widespread use of reciprocity agreements", by which he referred to agreements whereby one refiner supplies relatively large volumes of product to another refiner who does not have a refinery in that region, in return for similar supply from the other refiner in a distant market where the first refiner does not have a refinery. The close working relationships and the degree of mutual trust and understanding among refiners that the Director felt resulted in significant part from reciprocal supply commitments were, in the Director's view, reflected in an unwillingness to compete in price at the pumps when entry was not threatened and also in "mutually reinforcing disciplinary behavior" when new entry or price competition were threatened.

The Director's concerns grew during the course of the Commission's hearings, largely because in 1982 Petro-Canada and Gulf entered into a joint ownership arrangement for the Port Moody refinery, and in 1982 and 1983 interdependent supply commitments were entered into by BP/Shell and by

Gulf/Texaco in conjunction with refinery closures by each of them. This gave rise to allegations by the Director that the refiners were cooperating in the reduction of refining capacity in order to avoid downward pressures on pump prices that resulted or would result from surplus refining capacity or that would intensify if capacity were expanded. The Director asserted in his final argument that "never before in Canadian history has the manufacturing sector of the petroleum industry been this tightly coordinated", and that "the only purpose served by reciprocity is the control of competition".

In addition to the joint market power that the Director concluded resulted, in part, from inter-refiner product supply agreements, the Director alleged that four particular harmful results flowed from reciprocal supply commitments:

1. They leave very little product available for sale by the refiner to unintegrated resellers.
2. Negotiation of reciprocal agreements involves the exchange of detailed forecasts, other information and future plans between competitors which facilitates both coordination in changes to refinery capacity and the detection and deterring of aggressive marketing strategies.
3. The balancing of exchanged volumes "necessarily entrenches existing market shares".
4. They help preserve inefficient refineries and lead to higher cost sourcing than would otherwise occur, resulting in a misallocation of resources.

Each of these allegations was responded to in detail by the refiners and is addressed in section 4 of this chapter. In the Commission's view, however, assessment of the Director's assertions are only some of the issues relating to reciprocal supply arrangements. There is a long history of exchange of crude oil and petroleum products in the industry. Assuming that firms engage in trades or other forms of reciprocal supply when it is efficient for them to do so, does efficiency for the parties spell efficiency for society? Under competitive conditions it should.

Numerous specific questions might be asked concerning reciprocal supply agreements. They all filter down to the basic questions, which are whether they tend to lead to either or both higher costs and prices. Scenarios can be formulated leading to positive and negative answers to both questions.

The Commission has also considered whether inter-refiner supply arrangements dampen market forces or give rise to any other exclusionary or foreclosure effects that inhibit either entry or expansion and that should be of concern to public policy. In particular what is the effect, if any, of the inability of a refiner to reciprocate in the purchase of product, upon its opportunity to supply product from its refinery? Does the volume and duration of any supply or receiving commitments, whether of a total requirements or other nature, unreasonably foreclose recipients from investing in refining or storage capacity? Are there circumstances in which interdependent supply commitments give one refiner an unreasonable degree of influence over another refiner's ability to build or dispose of a refinery or other assets? Do inter-refiner supply arrangements include or result in any restrictions, either mutual or one-sided, on the manner or markets in which the recipient of product may distribute the product or otherwise conduct its business? Is downward pressure on wholesale prices reduced as a result of reciprocal supply arrangements? Refiners are very powerful buyers because they generally have a number of supply options, including entry. If they were required to buy rather than to exchange product, would they force down prices, particularly in areas where they could ship in domestic or imported product? Unfortunately the evidence before the Commission provided only partial answers to these questions.

As noted, the Commission's assessment of the issues is unavoidably judgemental. In deciding whether it is appropriate to recommend remedies or particular courses of action, the more disruptive the implementation of the recommendation would be, the clearer one must be about one's conclusions regarding existing harm and the probable effects of the recommendation. Assuming for the sake of argument that inter-refiner supply agreements of certain types cause some harm, how clear is it that they do more harm than good, and if they were restricted how would refiners seek to address the legitimate concerns previously met by such agreements? Would they withdraw from certain markets? If they did so, would they be replaced by refiners in the area or by non-integrated marketers? Would more product pipelines be built, which would affect the cost of supply but would increase supply flexibility?

Leaving aside the Director's concerns about vertical integration, the remedial measures he proposed for the refining sector related solely to inter-refiner supply agreements. He proposed subjecting them to a regulatory approval process and stated his rationale as follows:

> Public policy should seek to encourage such arrangements whenever there are resulting gains in efficiency; but it must also seek to reduce the harmful effects of any coincident increases in market power. It must attempt to ensure that the Canadian consumer is also a beneficiary of greater efficiency.

As to the form of regulatory approval process, the Director had proposed in the Green Book that in view of the industry expertise possessed by the National Energy Board (NEB), NEB approval be required for all "refinery supply agreements" between Canadian refiners that affect extra-provincial "trade and exchange". He further recommended to the Commission that before granting such approval, the NEB be required to consult with Consumer and Corporate Affairs Canada regarding the likely effect of the agreements or any aspect of them on competition.

Following the Commission's hearings, and in the course of the various steps of written argument, the Director's proposal evolved to the following:

1. All reciprocal (i.e., interdependent) supply arrangements between refiners in excess of 90 days be prohibited, except that any such arrangement already in existence may be continued if, upon review by the Restrictive Trade Practices Commission it, or a modification of it, is found to have a beneficial effect upon competition.

2. Any other existing or future supply arrangement between refiners exceeding two years in duration be prohibited unless, upon review by the Restrictive Trade Practices Commission, it is found to be likely to have a beneficial effect upon competition.

The Director also stated that he included in "reciprocal supply arrangements" "what might be described as joint venture or operating agreements", by which the Commission understood him to refer to the shared ownership and control of the Port Moody refinery at the time.

The Director further submitted to the Commission that several of his remedial proposals were interdependent, and that "it would serve no useful purpose to prohibit reciprocal exchange without dealing with acquisitions, exclusive dealing and consignment selling". His proposals in those respects were that acquisitions by refiners of retail outlets be subject to approval by the Commission, that exclusive dealing in motor fuels be prohibited, and that consignment selling and other forms of pump price control over outlets not owned and operated directly by the supplier be prohibited.

2. The Nature of Refining

(a) The Process

Refining petroleum requires complicated equipment to alter the relationships between the hydrogen and carbon atoms which form the hydrocarbons of crude oil. A variety of feedstocks are used including crude oil from underground wells, synthetic crude oil from tar sands and condensate from natural gas. The chemical and physical properties of each feedstock vary, for example as to sulphur content and specific gravity. These characteristics mean that each refinery is designed to handle particular types of feedstock in order to produce the desired range and quantities of product. Each refinery is typically designed to operate at maximum efficiency using feedstocks within specific ranges, and in order to process feedstocks with specifications outside those ranges, as efficiently, further capital expenditures may be required. Thus, the decision as to the type of refinery to build is dependent upon a complex and long term assessment of the markets for various refined products and on the projected availability and cost of alternative feedstocks.

With respect to the demand for the various products to be produced, the refiner must estimate, for example, the quantities of motor gasoline, kerosene, diesel fuel, light and heavy fuel oil and asphalt required for its market. Each refiner can vary the product slate within limits, but beyond these limits further capital expenditure is required to eliminate certain bottlenecks or constrictions in the continuous flow refining processes. Indeed, part of the sophistication in refinery design is to plan for expansion of capacity with minimum capital expenditures for removing bottlenecks.

Inflexibility in the operation of refineries arises because the products are produced jointly. The production of gasoline necessarily results in the production of other products, such as heating oil and diesel fuel. Thus, obtaining the desired quantity of one product often leads to either a shortage or excess supplies of other products. During the 1984 U.K. coal strike, for example, European refineries increased their production of heating oil and bunker oil as a substitute for coal, and at the same time were forced to increase the production of gasoline which caused gasoline prices to fall as the surplus was sold off.

In 1984 the approximate average percentage distribution of the principal products produced by Canadian refineries was: motor gasoline (41 per cent),diesel (19 per cent), heavy fuel oil (11 per cent), light fuel oil (10 per cent), petro-chemical feedstock (5 per cent), aviation fuel (5 per cent) and other products (9 per cent) — Appendix G, Table 1. The product slate has varied by region and over time. Motor fuels, namely, gasoline and diesel, are disproportionately important to Western Canadian refineries because in western Canada natural gas is more extensively used than light and heavy fuel oil for heating and power. Fuel oils are still heavily relied upon in Atlantic Canada, but their importance in Ontario and Quebec are rapidly declining as they are replaced by natural gas and electricity. Overall, motor fuels have rapidly grown in relative importance for all Canadian refineries in the last six or seven years as fuels oils have lost ground due to their higher prices relative to other energy sources and due to the "off-oil" program of the Federal Government. In order to satisfy the changing composition of demand for petroleum products refineries have had to be made more sophisticated through additional investment in feedstock upgrading and secondary processing equipment.

Changes in the general long term picture for feedstock supply also affect refinery design and cost. Canadian refineries are therefore directly affected by the decline in Canada's light crude oil reserves, and by the availability of extensive heavy crude oil reserves.

A refinery requires a continuous flow manufacturing process. The continuous flow of crude oil, semi-processed and refined products passing through the plant is very costly to interrupt by closing down and then restarting the process. A refinery can be economically operated, although less efficiently, at less than full capacity, but there comes a point in the utilization rate where it cannot operate economically. This point varies among refineries and is affected to a degree by changing feedstock costs and product prices, but few refineries can function below 50 per cent utilization. Exceptions can occur where a refinery is built with several parallel pieces of equipment, some of which can be closed down completely while others continue to operate. Irving's refinery, for example, has three distillation units, one or two of which can be closed down while the refinery continues to operate at less than half its total rated processing capacity.

Capacity is measured in barrels per day. "Calendar day capacity" represents the net average daily volume over a year when downtime for maintenance is included, whereas "stream day capacity" is a shorter term measure referring to the maximum volume when the refinery is working at full capacity with no downtime. Crude oil distillation units typically operate for about 345 days per year, so that a refinery's calendar day capacity is usually about 95 per cent of its stream day capacity. So, if less downtime is experienced in a given period than the average that was anticipated when rated capacity was calculated, the refinery will operate during that period at more than 100 per cent of rated (calendar day) capacity. Also, rated capacity depends on the use of a particular type of crude oil, and use of a different type can cause rated capacity to vary. Texaco's Nanticoke refinery with 95,000 barrels per day (b/d) rated capacity could and did operate at 110,000 b/d when certain types of crude oils were processed.

The need to maintain flow makes a refinery vulnerable to disruption of feedstock supply and to a failure to ship refined products. Storage tank capacity at the refinery for both crude oil and refined products accommodates predictable peaks and valleys in feedstock and product deliveries. In addition, a refinery may be connected to crude oil and refined products pipelines which allow storage to take place at a distance from the refinery. In this sense storage and transportation are extensions of the refinery. Storage is usually owned by refiners, while pipelines are owned both by refiners and by other investors.

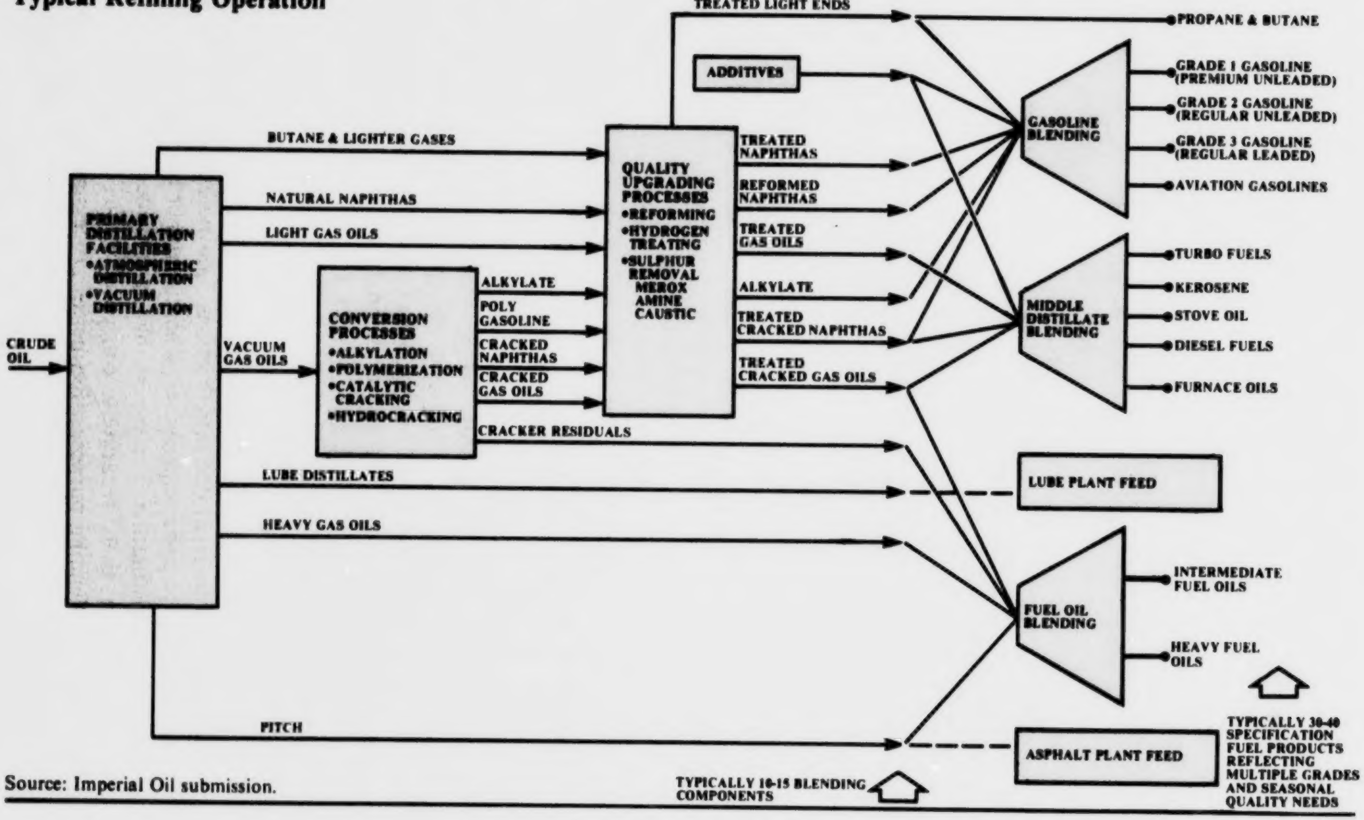
Usually a refinery can only be altered in a significant way with considerable expenditure. Given the long lead time needed to plan and build a refinery before it can come on stream, it is not surprising that sometimes the assumptions about inputs, outputs, government policy, and price levels and other market conditions have changed before any products are actually produced. The difficulties of forecasting all the parameters accurately over the full projected or possible life of the refinery are of course even greater, and as a consequence difficult judgements must be made about how to build flexibility into a refinery. Since refineries are typically expanded and modified during their lifetimes, most operating refineries contain a range of technologies of different vintages.

Petroleum products must meet exacting quality and performance specifications. Most are blends of various refined or additive components. A typical refinery may produce 30 to 40 fuel products blended from 10 to 15 key components, and a typical product may contain several components. Some may specialize in a particular product: Gulf's Moose Jaw and Calgary refineries (the latter closed in 1983) produced primarily asphalt from heavy crude oil feedstocks. Petrosar's Sarnia refinery exists for the production of petrochemicals, and produces gasoline and heating oil only as by-products.

The complexity of a typical refinery is illustrated by Figure 1, although each refinery is a unique, custom constructed, integrated system, and is "typical" only in the sense that it may contain some or all of the equipment shown. The crude oil passes through a series of distillation, conversion and upgrading processes to produce a slate of products listed on the right hand side. Variation of the product slate results from altering the inputs, the processing equipment or the additives.

Distillation involves the heating of crude oil so that the various hydrocarbons can be separated into fractions. Low boiling point fractions can be separated at atmospheric pressures, whereas higher boiling point fractions require vacuum distillation. The vapors that are produced at different boiling point ranges are then separately condensed into distinct products or components for blending purposes. Refineries processing synthetic crude oil, such as Shell's new refinery at Scotford, Alberta, do not require a vacuum distillation tower.

FIGURE X-1.
Typical Refining Operation


CRUDE OIL
PRIMARY DISTILLATION FACILITIES
•ATMOSPHERIC DISTILLATION
•VACUUM DISTILLATION
BUTANE & LIGHTER GASES
NATURAL NAPHTHAS
LIGHT GAS OILS
VACUUM GAS OILS
LUBE DISTILLATES
HEAVY GAS OILS
PITCH
CONVERSION PROCESSES
•ALKYLATION
•POLYMERIZATION
•CATALYTIC CRACKING
•HYDROCRACKING
ALKYLATE
POLY GASOLINE
CRACKED NAPHTHAS
CRACKED GAS OILS
CRACKER RESIDUALS
QUALITY UPGRADING PROCESSES
•REFORMING
•HYDROGEN TREATING
•SULPHUR REMOVAL MEROX AMINE CAUSTIC
TREATED LIGHT ENDS
ADDITIVES
TREATED NAPHTHAS
REFORMED NAPHTHAS
TREATED GAS OILS
ALKYLATE
TREATED CRACKED NAPHTHAS
TREATED CRACKED GAS OILS
GASOLINE BLENDING
MIDDLE DISTILLATE BLENDING
LUBE PLANT FEED
FUEL OIL BLENDING
ASPHALT PLANT FEED
PROPANE & BUTANE
GRADE 1 GASOLINE (PREMIUM UNLEADED)
GRADE 2 GASOLINE (REGULAR UNLEADED)
GRADE 3 GASOLINE (REGULAR LEADED)
AVIATION GASOLINES
TURBO FUELS
KEROSENE
STOVE OIL
DIESEL FUELS
FURNACE OILS
INTERMEDIATE FUEL OILS
HEAVY FUEL OILS
TYPICALLY 10-15 BLENDING COMPONENTS
TYPICALLY 30-40 SPECIFICATION FUEL PRODUCTS REFLECTING MULTIPLE GRADES AND SEASONAL QUALITY NEEDS

Source: Imperial Oil submission.

Conversion equipment and processes allow the refinery to convert the heavier oils produced to lighter, higher-value products such as gasoline and middle distillates, thereby obtaining more of these products from a given barrel of crude oil. Conversion processes include catalytic cracking, hydrocracking, polymerization, alkylation, and coking. A refinery without such conversion facilities is known as a "skimming" refinery. Early refineries tended to be skimmers, but by now most have either been upgraded or replaced because of the changing composition of demand in favor of lighter products.

Upgrading processes of various types are used to improve feedstock quality (e.g. remove sulphur) and to improve product quality such as by increasing octane ratings in order to satisfy the increasing requirements of the various grades of motor gasoline, aviation gasoline, diesel and heating oils.

(b) Scale Economies and Regional Location

Economies of scale exist in refining because capacity can usually be increased with a less than proportional increase in investment costs. Larger refineries therefore tend to have lower investment costs per barrel of capacity, although differences in product slates, refinery age and so on make generalizations difficult. Scale economies also result from the fact that labor and maintenance costs do not rise proportionally as fast as increases in refining capacity.

The evidence submitted during the inquiry showed various estimates of scale economies in refining. In the broadest terms it appears that with current technology average costs of production reach a minimum at a utilized capacity of approximately 200,000 b/d, although opinions differ on how average costs increase for smaller sized refineries. For example, F.M. Scherer in his *Economics of Multiplant Operations* (1975) reports that costs are about 5 per cent above the minimum with a refinery size of 65,000 b/d, although Gulf Canada noted considerably higher cost increases for refineries of this same size. Scherer's estimate takes into account technical changes that had sharply reduced the costs of large refineries and had subsequently become available for medium sized plants.

The high level of fixed costs, however, creates penalties for firms operating refineries at less than full capacity. The cost penalty means that a refiner may be better off operating a smaller higher cost plant at full capacity rather than a larger plant with unutilized capacity.

Table X-1

Canadian Refinery Capacity by Company and Location,* December 1985

Barrels (Cubic Meters) per Calendar Day

Company	Atlantic		Quebec		Ontario		Prairies		BC/NWT		TOTAL
Imperial Oil	Dartmouth	86,802 (13,800)			Sarnia	130,203 (20,700)	Edmonton	182,410 (29,000)	Ioco Norman Wells	42,772 (6,800) 3,145 (500)	445,332 (70,800)
Petro-Canada			Montreal	89,947 (14,300)	Trafalgar Clarkson**	79,883 (12,700) 59,755 (9,500)	Edmonton	121,397 (19,300)	Port Moody Taylor	37,111 (5,900) 18,241 (2,900)	406,334 (64,600)
Shell			Montreal	123,284 (19,600)	Sarnia	74,222 (11,800)	Bowden Scotford	5,661 (900) 50,320 (8,000)	Shellburn	25,160 (4,000)	278,647 (44,300)
Texaco	Halifax	20,128 (3,200)			Nanticoke	94,979 (15,100)					115,107 (18,300)
Irving	Saint John	250,342 (39,800)									250,342 (39,800)
Ultramar			St-Romuald	100,011 (15,900)							100,011 (15,900)

Suncor					Sarnia	89,947 (14,300)					89,947 (14,300)
Federated Co-operatives							Regina	45,000 (5,700)			45,000 (5,700)
Husky									Prince George	10,064 (1,600)	10,064 (1,600)
Turbo							Calgary	27,676 (4,400)			27,676 (4,400)
Chevron									Burnaby	37,111 (5,900)	37,111 (5,900)
TOTAL		357,272 (56,800)		313,242 (49,800)		528,989 (84,100)		432,464 (67,300)		173,604 (27,600)	1,805,571 (285,600)

Notes: * Operating refineries only. Petrosar's refinery near Sarnia has been omitted because its gasoline and heating oil production is purely incidental to the manufacture of petrochemical feedstocks. Petro-Canada's asphalt refinery at Moose Jaw and Husky's asphalt refinery at Lloydminster have also been omitted because of their specialized nature. The output of the two asphalt refineries is included in some of the other general data in this chapter but the refineries are too small to affect that data significantly.

** Lubricants plus a special energy stream shipped to Montreal for further processing into gasoline and other products.

Source: Energy, Mines and Resources and evidence.

The number of refineries with 200,000 b/d capacity that could be supported by sales in each of the regions of Canada are few: one in the Atlantic Provinces, two in Quebec, three in Ontario, two in the Prairie Provinces and one in British Columbia. The actual level of concentration is much lower than this since Canada has 25 operating gasoline-producing refineries with a simple average size of about 70,000 b/d and a weighted average size of only about 100,000 b/d. Nevertheless, it is clear that significant cost savings for the Canadian refining industry result from a fairly high level of concentration. The average size of Canadian refineries, while small compared to those in western Europe, Japan and certain other countries, has increased greatly from the 1950s through the 1970s. Canada and the United States have approximately the same share of refining capacity in plants of 75,000 b/d or less, but almost half the U.S. capacity is in plants of 150,000 b/d or more, compared to 23 per cent in Canada — see Appendix G Tables 2 and 3. Canadian refineries probably compare favorably with those in other parts of the world in terms of modernity and technical sophistication. Over time larger refineries have been built to take advantage of scale economies and product pipelines that link refineries to distant markets. In the 1950s and 1960s modernization took place through the addition of catalytic crackers, and since the 1960s through the addition of hydrocrackers. These modifications have added flexibility by allowing refiners to respond to demand changes and to use different kinds of crude oil.

The extent to which economies of scale can in fact be realized depends on the size of the available market and on alternative sources of supply. The cost of transporting crude oil and refined products and the extent of cost savings from larger size refineries are key determinants in the location and size of refineries. Table 1 shows the size and location of refineries. The map at the back of the Report shows refinery locations and pipeline linkages. Some plants are situated close to sources of crude oil, some close to large markets demand and some at points intermediate between crude oil sources and markets but often at gateways to markets or on tidewater so as to benefit from low transportation costs. Alberta refineries are connected by product pipelines to major Prairie markets and to a lesser extent, recently, with British Columbia. Crude oil pipelines run from Alberta to refineries in British Columbia and as far east as Montreal. Refineries in the lower mainland of B.C., although on tidewater, cannot receive crude oil by tanker because of regulations prohibiting the movement of crude oil through the Georgia Straits. Even without these regulations, the port of Vancouver would be unable to handle large tankers and crude oil would have to be unloaded elsewhere for shipment by pipeline to the B.C. refineries.

In Eastern Canada the closed Point Tupper (Nova Scotia) and Come-By-Chance (Newfoundland) refineries, both of which are on tidewater, were built primarily to refine imported crude oil and to export product by tanker to the U.S.. The Montreal and Quebec refineries were a combination of gateway and market oriented refineries, importing crude oil by ship, by pipeline from Portland to Montreal and, in recent years, by pipeline from Western Canada. These refineries serve both Quebec and Eastern Ontario markets, the latter via the Trans-Northern Pipe Line, although from 1961 to 1973 shipments west of the Ottawa Valley line were constrained by the National Oil Policy. Ontario refineries in Sarnia and Oakville were a combination of market oriented and gateway refineries. Sarnia developed largely as a refinery site for crude oil imported from the U.S.. Western Canadian crude oil however gained refinery markets in Eastern Canada with the building of the Interprovincial Pipe Line which reached Sarnia in 1953, Port Credit in 1957, and Montreal in 1976.

(c) Competitive Pressures Resulting from High Fixed Costs

The high fixed costs of a refinery of any size creates pressure for individual refiners to maximize capacity utilization and perhaps, to that end, to reduce their product prices. Since most costs other than feedstock are fixed, a refiner can cover the variable costs of additional business while still falling short of recovering the total costs of these additional sales. Furthermore, the costs of closing down and restarting a refinery are so high that it may pay a refiner to make additional sales at prices that are temporarily below variable costs. High percentages of excess refining capacity can thus result in price cutting and in other methods of trying to increase sales in all markets in which refiners participate.

3. General Assessment of Competition

(a) Historical and Geographical Overview

The Canadian refining industry had its origins in 1857 in Lambton County, Ontario where, following the discovery of crude oil, kerosene was produced in small "tea-kettle" skimmer refineries. Subsequently refineries were constructed across Canada, but these were supplied primarily with imported crude oil up to the time of the Leduc crude oil discovery in 1947. After Leduc and other discoveries in Western Canada the supply situation changed and Canadian crude oil, which in 1947 accounted for 9 per cent of crude oil used by Canadian refineries, increased its share to 59 per cent in 1965 before declining to under 50 per cent in 1973. With the extension of the pipeline to Montreal and the availability of shipping subsidies to Atlantic refineries, its share rose to 83 per cent in 1984 (Appendix G Table 4).

Canadian deregulation of crude oil prices on June 1, 1985 may cause this percentage to decrease if refineries in Eastern Canada substitute imported for domestic crude oil.

The nature of Canadian petroleum markets is such that refiners typically enter into a variety of supply and distribution arrangements. Most refiners are vertically integrated with marketing organizations for reasons having largely to do with security of supply to large marketing organizations and with achieving a degree of stabilized demand for the refinery. Also, transportation costs and refining economies of scale are such that, when taken with Canada's large geographical expanse and its relatively small population, each such refiner/marketer who wishes to market on a national scale cannot realistically operate a refinery in each region of the country. Accordingly, a refiner typically has more product than its own marketing organization requires in regions where it operates a refinery, and typically has insufficient product elsewhere. To an extent, refiners use their refining surpluses in one region to obtain supplies in another region.

Different industries such as cement, steel and petroleum, where the suppliers have similar economic characteristics but differ with respect to vertical integration and the geographical stability of demand, respond to the geographic dispersion of markets in different ways, and each type of response can have different competitive implications. For example, local regional monopolies, basing-point pricing systems with common delivered prices, and extensive cross-hauling of products are avoided by the inter-refiner supply arrangements found in the petroleum industry. These arrangements and their effects are examined below in section 4 of this chapter.

A variety of entry and expansion paths have been followed by Canadian refiners. Some began as refiners of imported crude oil and integrated forward into marketing to ensure a degree of captive demand. One, the Come-By-Chance refinery in Newfoundland, entered without any marketing outlets and for this and other reasons never became fully operational. Others started in marketing and integrated backwards into refining, through new entry or acquisition, to ensure satisfactory supply to a growing marketing organization. Some large marketers have achieved satisfactory security of supply through combinations of processing agreements and long- and short-term supply contracts with refiners, and have made conscious decisions not to enter into refining themselves.

Transportation costs to and from refining centres tend to create regional markets, and inter-refiner supply agreements reflect this geographic segmentation. One word of caution should be introduced; the division of national data into regional components reflects the way in which government reporting agencies present the information. The regions do not reflect any rigorous definition of economic markets, which would involve an attempt to draw an either blurred or unrealistically precise boundary around a group of producers selling to a common group of buyers in a given area. The reported regional data may approximate economic markets in some instances, but refined products are shipped to some extent between Ontario, Quebec and the Atlantic provinces as well as between Alberta and British Columbia. The Trans-Northern Pipe Line moves products between Ontario and Quebec, and the Trans Mountain Pipe Line between Edmonton and Kamloops. Also, transportation cost savings may in some cases result from trading product within the regions as identified. Changes in transportation options and cost alternatives also affect market boundaries. For example, Texaco closed its Montreal refinery in 1983 with a view to meeting its Quebec supply requirements from its refineries in Halifax and Nanticoke. One could now, with more validity than in the past, treat Canada as having two regions for refining purposes, namely, Western Canada and Eastern Canada.

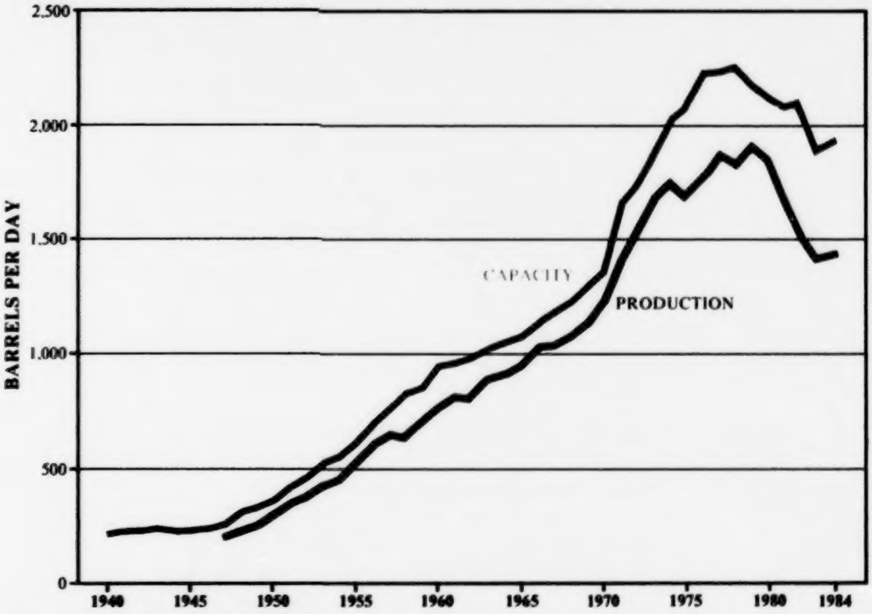
The fact that the product and geographic dimensions of markets are rarely if ever precise does not destroy the validity of market analysis, but the arbitrary and artificial aspects of geographic segmentation must be kept in mind when concentration data, in particular, is considered, lest the use of numbers create an undue impression of precision.

The refineries operating in Canada as of the end of 1985 are shown in Table 1. A total of eleven firms operate 25 gasoline-producing refineries with a total capacity of 1.8 million b/d. The refineries are located in seven provinces and in the Northwest Territories. No company has a refinery in all five regions shown in Table 1. Imperial Oil, Shell and Petro-Canada are represented in four of the five regions, Texaco in two regions and the remaining seven firms in one region only. Consequently, if a refiner is to market products in all five regions it must either transport to, or acquire products for resale in, any region where it does not operate a refinery.

The present configuration of refineries is the result of firm entry and exit, expansion, mergers, and refinery closures. The process is continuous as investors adjust to growth or contraction in overall demand, changes in the components of demand among the various products, geographical shifts in demand, changing crude oil and product pipeline configurations, developments in refining technology, changes in environmental regulations, changes in feedstock sourcing and the dramatic rise of feedstock prices since 1973.

Figure 2 provides a visual statement of changes in Canadian refining capacity. From modest beginnings in the late 1860s in Ontario, Canadian total capacity rose to 34,000 b/d in 1919, 115,000 b/d in 1930 and over

FIGURE X-2.
Canada — Refining Capacity and Production
1940-1984



Source: Appendix G, Tables 4 and 5.

200,000 b/d by the beginning of World War II. A half million b/d was reached in the early 1950s, one million by 1963, and two million by 1974. A peak capacity of almost two and a quarter million b/d occurred in 1978. By 1984 refinery closures had reduced capacity more than new investment had added to it, so that by 1984 industry capacity was back to the 1974 level of approximately two million barrels per day. Excess capacity on a national basis is shown in Figure 2 as the gap between production and capacity.

Another measure of change is the number of operating refineries, which since World War II has fluctuated between a high of 44 in 1960 and a low of 25 in 1985 (see Appendix G Table 5). The 1950s saw a large increase in the number and capacity of refineries, while there has been a significant decrease in the number since 1982. The historical increase was associated with high and rising capacity utilization, while the decline was due to recent falling capacity utilization resulting from decreasing demand (see Appendix G Table 4).

Since 1950 the industry has made substantial capacity adjustments. Each adjustment requires long lead times for planning and construction.

Mothballing or dismantling a refinery also involves substantial costs, as well as considerations about the availability of alternative supply in the region where the refinery is located. Withdrawal from refining in a region does not usually mean withdrawal from marketing, so the necessary product must be acquired from other domestic or foreign suppliers.

Capacity utilization on a Canada-wide basis has ranged between a high of 91 per cent in 1970 and a low of 72 per cent in 1982 (Appendix G Table 4). While utilization generally remained above 85 per cent until 1974, it only averaged 81 per cent for 1975-1984 and 77 per cent for 1981-1984. Not only is excess refining capacity very costly in view of the substantial fixed costs, it also puts downward pressure on prices. Pressures for further industry rationalization, with fewer operating refineries, therefore continue and further closures may occur.

The use of statistics tends to depersonalize developments in an industry where the major refiners and their brands have become national or regional household names. Since 1954 there have been as many as 24 firms operating refineries in any one year and as few as 11, which is the current situation. Although Imperial Oil, Gulf, Shell and Texaco have been important parts of the Canadian refining landscape for many years, considerable firm entry and exit and changing rank positions of firms in regional and national markets has occurred. By 1986, Petro-Canada, after entering in 1979, had become the second largest refiner.

The regional distribution of refining capacity has also fluctuated. Until the 1960s, when the National Oil Policy was established to preserve Ontario markets for western Canadian crude oil, there was steady growth in refining capacity in and around Montreal. Recent refinery closures in Montreal have resulted in Quebec's share of national capacity falling by about one half, while shares increased in the Atlantic, Ontario and Prairie regions. In 1984, refining capacity was in the order of 19 per cent in the Atlantic region, 20 per cent in Quebec, 28 per cent in Ontario, 24 per cent on the Prairies and 9 per cent in B.C. (Appendix G Table 5). Closure of Gulf's Montreal refinery at the end of 1985 (about four per cent of national operating capacity) further decreased Quebec's share of national refining capacity.

Canadian refinery output as a percentage of apparent Canadian consumption of refined products, measured by production plus imports less exports of refined products, ranged between 82 per cent and almost 100 per cent between 1950 and 1973. Since 1973 the figure has been slightly in excess of 100 per cent, showing that Canadian production and capacity has for the past decade been more than adequate to meet demand and has allowed Canada to become a net exporter of refined products. Product exports were 10 per cent and product imports 7 per cent of apparent Canadian consumption in 1984 (Appendix G Table 6). Imports have been rising both in absolute terms and relative to apparent Canadian consumption since 1979, rising as much as 62 per cent in 1984.

These developments have taken place at a time when petroleum products have experienced a declining share of a contracting energy market. Total energy consumption of all kinds increased about three and half times in Canada between 1950 and 1980, and then decreased 2 per cent from 1980 to 1983. For the consumption of petroleum energy in Canada, the comparable figures were an increase of five times and a decrease of 22 per cent. Petroleum's share of total Canadian energy consumption increased from 29 per cent in 1950 to 48 per cent in 1965 and decreased to 33.0 per cent in 1984 — Appendix G Table 7.

In considering the structure of the Canadian refining sector it is also important to bear in mind the effect of government policies, including government ownership, that relate to the sector. Government interest stems from a variety of factors including security of supply, regional development and environmental concerns, and the substantial investment required for refineries and pipelines. The growth of Petro-Canada, the Ontario Government's interest in Suncor and the Federal Government's interest in Petrosar are the primary examples of direct government investment. Other examples of important government policies over the past three decades include the National Oil Policy, financial assistance for upgraders and pipelines, crude oil transportation subsidies, supply policies of the Alberta Petroleum Marketing Commission in the past, Newfoundland Government guarantees to Ultramar when the Holyrood refinery was built, limits on the lead content of gasoline, and local sulphur emission regulations.

(b) Concentration[1]

For reasons referred to in section 1 of the chapter, the market shares of the largest firms is frequently a useful general indicator of competition and of the degree of scrutiny that may be required to identify restraints or potential problems. It requires measuring the sizes of firms and defining the market in product and geographic terms. Concentration data becomes more useful when compared over time and used with other structural information such as changes in the rank and relative sizes of firms, and firm entry and exit. Refining capacity is used here as a measure of firm size and as a proxy for production.

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[1] The data used in this section come from the Energy, Mines and Resources, Canada, *Petroleum Processing in Canada*, issues for Jan. 1961, Jan. 1971 and Dec. 1981 for the years 1960, 1970 and 1980, and from Energy, Mines and Resources files for 1984.

As is shown in Table 2, nation-wide concentration based on the shares of the largest four firms and the four historical majors (Imperial Oil, Gulf, Shell and Texaco) declined from 1950 to 1984. Regionally, the largest four firm concentration has remained high (between 75 per cent and 100 per cent in 1984), while the share of the four historical majors has declined and in 1984 was between 30 per cent and 68 per cent in all regions except the Prairies. The high (largest four firm) concentration on a regional basis has occurred with a turnover of firms, as their identity changed either through entry and exit of firms, or through different firms being represented among the four largest firms. High concentration with low turnover of firms, and with firms maintaining their same rank position in the market, would suggest weaker competitive pressures. High concentration with turnover among the leading firms and changes in rank position, however, in the absence of other explanations suggest that the firms are reacting to changing market forces in a more competitive manner. Regional markets have experienced turnover and changes in rank position of the leading firms, although some of the refineries in Eastern Canada were set up to compete in export markets.

Table X-2

Concentration in Petroleum Refining Capacity
Canada and by Region, 1950 — 1984

	Industry Share	
	Largest 4 firms	4 Majors[a]
Canada		
1950	87.2	87.2
1960	67.4	67.4
1970	77.8	75.0
1980	62.3	61.2
1984	67.1	60.0
Atlantic		
1960	100.0[d]	50.3[b]
1970	100.0	57.1[c]
1980	100.0	28.8[c]
1984	100.0[d]	30.5[c]
Quebec		
1960	81.8	81.8
1970	73.3	71.3

Table X-2—concluded

Concentration in Petroleum Refining Capacity
Canada and by Region, 1950 — 1984

	Industry Share	
	Largest 4 firms	4 Majors[a]
Quebec—concluded		
1980	66.8	57.6
1984	100.0	50.1[c]
Ontario		
1960	76.8	67.2[d]
1970	81.8	81.8
1980	71.0	71.0
1984	74.7	67.9
Prairies		
1960	75.4	73.4
1970	86.9	86.3
1980	90.1	86.8
1984	88.9	79.6[d]
BC/NWT		
1960	90.3	72.4[d]
1970	85.7	71.7[d]
1980	85.2	64.9[d]
1984	84.6	63.5[d]

Notes: a. Imperial Oil, Shell, Gulf, Texaco. The capacity of Gulf's Port Moody refinery, owned 49 per cent by Petro-Canada in 1984, is attributed all to Gulf.

b. 1 firm only.

c. 2 firms only.

d. 3 firms only.

The share of the largest firms in terms of production (measured by capacity) may be different from their share in terms of sales, partly because refiners acquire product from each other and partly because refineries do not always operate at full capacity. According to information from the federal Petroleum Monitoring Agency the four majors plus Petro-Canada accounted in 1984 for 77 per cent of the volume of all refined petroleum products sold in Canada. This figure would be a little higher if Petrosar's petrochemical feedstock production were excluded.

The rank positions of the leading firms with refineries in Canada are shown in Appendix G Table 8. On a national basis Imperial has ranked first since 1950. Gulf has usually been second and, since 1960, Shell has usually ranked third. Texaco's ranking has fluctuated more, falling to fifth place in 1970 and seventh in 1984, partly as a result of new entrants such as BP, Irving and Ultramar, and closure of Texaco's refineries in Montreal and Strathcona in 1983.

On a regional basis there has been considerably more alteration in rank positions, especially in the Atlantic, Quebec and Ontario regions where change has come about due to new entrants, takeovers, new refinery construction and some refinery closures. For example, Imperial has maintained its number one ranking from 1960 to 1984 only in the Prairies and Ontario. In 1984, Imperial ranked first in three regions, second in one and was not represented as a producer in Quebec.

Until Petro-Canada's purchase of Gulf assets in 1985 there had been considerable stability in national rank positions among leading firms but less stability regionally, which is the more relevant basis for examining competitive pressures. The existence of inter-refiner supply agreements, however, complicates interpretation of the information because a firm that does not have a refinery in a region may as a result of such an agreement have indirect access to capacity on an ongoing basis.

On a national basis concentration in the refining sector has declined. The regional shares of the largest four firms have always indicated high concentration, ranging in 1984, between 75 per cent in Ontario to 100 per cent in Quebec and the Atlantic region. At the same time there has been some change in the rank position of the four majors and new firms have become leading firms in certain regions, such as Ultramar, BP and Petrofina (and now Petro-Canada) in Quebec, and Suncor and Petro-Canada in Ontario. These changes since 1960 have involved a reduction by half in the number of firms (from 24 to 11), by about one-third in the number of refineries (from 44 to 25) and include a reduction in refinery capacity of about 16 per cent since 1979.[2]

(c) Entry and Exit

An examination of the record of entry and exit over time is important to an understanding of the extent to which the refining sector has changed in response to changes in technology, in feedstock supply options, and in characteristics of demand as transmitted through market forces. The picture is more complicated than simply counting refineries that open and close, or counting firms that enter or leave the sector by acquisition, new construction or closures, because industry response may take the form of new investment in existing refineries to add to or replace existing equipment. Also, the timing and geographical location of changes are relevant, as is the magnitude of investment and the nature of the capacity that is added or closed. It is, obviously, quite misleading to look at refinery closures, for example, without also considering new investment and the other dimensions of the adjustment process.

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[2] By U.S. antitrust standards as reflected in the 1984 U.S. Merger Guidelines, a Herfindahl-Hirschman Index (HHI) of market concentration measuring in excess of 1800 indicates a 'highly' concentrated market. The value of the HHI for the five regional refining markets in Canada for 1985 all exceeded 1800, i.e. for Atlantic 5536; Quebec 3394; Ontario 2111; Prairies 2685; and BC/NWT 2417.

In the 1870s there were approximately 100 petroleum "refineries" in Canada, mostly in Ontario and about half near London. They consisted mainly of cast iron stills producing kerosene, lubricating oils and waxes which were sold in Canada and also exported. Some consolidation occurred later in the nineteenth century (during which time Imperial Oil evolved from an amalgamation of 16 refiners), and from this base a significant expansion occurred as the demand for gasoline grew. There were fewer than 600 automobiles in Canada in 1905, and over 60,000 by 1915. Several new refineries were opened between this time and World War II, some of which, with several subsequent improvements and additions, remain in operation today.

Often, too, improvements made to operating refineries are more significant and costly than the original refinery itself. The Consumers' Co-operative refinery in Regina, for example, began in 1935 as a 500 b/d skimming refinery built at a cost of $32,000. The Irving refinery in Saint John, which opened in 1960 with a processing capacity of 41,500 b/d, was expanded to 110,000 b/d in the late 1960s and to 250,000 b/d in the mid-1970s.

The increasing technological sophistication and cost of refineries has reflected the variety and exacting specifications of petroleum products required for our increasingly mechanized society. Rising fixed costs, such as for sophisticated conversion or upgrading equipment, have also increased the economies of scale that can be achieved by larger refineries.

The magnitude of any particular refinery investment varies considerably with its nature and time. By way of example, Point Tupper (Gulf) and St-Romuald (Ultramar) were each built in 1970 at a cost of approximately $90 million but neither had sophisticated conversion equipment. Ultramar added that equipment to St-Romuald in the early 1980s at a cost of approximately $300 million. Texaco built Nanticoke in 1978 at a cost of half a billion dollars and has recently spent $80 million on improvements. The current replacement cost of Nanticoke, and also of Imperial Oil's refinery in Edmonton, would be approximately one billion dollars. Shell has recently built Scotford (partly for petrochemicals) for $1.3 billion, and has invested almost $50 million to expand and improve Shellburn. Between 1982 and 1984 Suncor spent $335 million improving the refinery it had opened in Sarnia in 1953, following prior significant expansions in the 1960s and 1970s that had increased the refinery's capacity from 15,000 b/d to 90,000 b/d. The purpose of the recent improvements was to make more efficient use of feedstocks in the production of gasoline and light products. The list could go on — the point is that refinery investments by a variety of firms, each costing in the tens or hundreds of millions of dollars, have not been and are not infrequent.

A snapshot of the industry in 1950 would have shown 19 firms with 32 refineries, versus 12 firms and 26 refineries in 1984 (Table 3). The fact

Table X-3

Summary of Petroleum Refiners in Canada, 1950 and 1984*

Firm	Number of Operating Refineries
1950	
Anglo-Canadian Oils Ltd.	1
British American Oils Co. Ltd.	4
Canadian Oil Companies Ltd.	1
Excelsior Refineries Ltd.	1
Gas and Oil Refineries Ltd.	1
Hi-Way Refineries Ltd.	2
Husky Oil & Refining Ltd.	2
Imperial Oil Limited	8
McColl-Frontenac Oil Co. Ltd.	1
Moose Jaw Refineries Ltd.	1
New Brunswick Oilfields Ltd.	1
Northern Petroleum Corporation Ltd.	1
North Star Oil Ltd.	1
Radio Oil Refineries Ltd.	1
Saskatchewan Federated Cooperatives	1
Shell Oil Company of Canada Ltd.	2
Standard Oil Company of B.C. Ltd.	1
Trinidad Leaseholds (Canada) Ltd.	1
Wainwright Refineries Ltd.	1
TOTAL 19	32

Table X-3—concluded

Firm	Number of Operating Refineries
1984	
Chevron Canada Limited	1
Federated Co-operatives Limited	1
Gulf Canada Limited	4
Husky Oil Operations Ltd.	1
Imperial Oil Limited	5
Irving Oil Limited	1
Petro-Canada	3
Shell Canada Limited	5
Suncor Inc.	1
Texaco Canada Inc.	2
Ultramar Canada Inc.	1
Turbo Resources Limited	1
TOTAL 12	26

**Note*: Petrosar's petrochemical refinery is omitted despite its production of some gasoline and heating oil. Similarly, each of Gulf's and Husky's asphalt refineries are omitted. Also, the 1984 figures do not reflect the closure of Gulf's Montreal refinery at the end of 1985 or the sale of Gulf's other refineries to Petro-Canada in 1985.

Source: Energy, Mines and Resources, *Petroleum Refineries in Canada*, July 1950 and Departmental files.

that few of the names appearing in 1950 occur in 1984 is misleading because some of the earlier firms evolved into the later firms (e.g. British American Oil into Gulf, McColl-Frontenac into Texaco, Canadian Oil Companies and North Star into Shell, Standard Oil of B.C. into Chevron and Saskatchewan Federated Cooperatives into Federated Co-operatives Limited.) Firms which existed in 1984 and had no such comparable ancestry include Suncor (entered refining in 1953), Irving Oil (1960), Ultramar (1961), and Turbo (1982). Petro-Canada entered through the acquisition of existing refineries, starting in 1979. All the latter five firms entered into refining with solid bases in marketing. This was not true of the entry into refining by Pacific Petroleums (acquired by Petro-Canada in 1979), which is discussed in section 4 below in this chapter.

The basic features of entry into and exit from the Canadian refining sector over the past three and a half decades can be summarized as follows (see also Table 4):

Table X-4

Entry Into and Exit from Refining, and Acquisition of Refineries by Decade, 1950 — 1984

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
									EXITS			
	NEW REFINERIES			NEW FIRM ENTRANTS					REFINERY CLOSURES			REFINERY ACQUISITIONS
				New Construction			Acquisition					
Year	Nos.	Initial Capacity b/d	Average Size	Nos.	Initial Capacity b/d	Average Size	Nos.	Capacity at Acquisition	Nos.	Capacity at Closure b/d	Average Size	Nos.
1950-59	16	114,400	7,150	10	67,500	6,750	3	9,500	7	10,000	1,429	7
1960-69	7	130,500	18,642	4	82,500	20,625	—	—	8	22,260	2,783	10
1970-79	4	365,000	91,250	1	90,000	90,000	1	14,300	8	233,450	29,181	2
1980-84	2	80,000	40,000	1	30,000	30,000	—	—	10	380,340	38,034	3
TOTAL	29	689,900	23,790	16	270,000	16,875	4	23,800	33	646,050	19,577	22

Sources: Cols. 1 & 2: Exhibit M-451, p. IV-10 plus Shell's Scotford refinery.
Cols. 4, 5, 7 & 8: Exhibit M-451, p. IV-13.
Cols. 9 & 10: 1950-1979, Exhibit M-451, p. IV-12; 1980-1984 Canadian Petroleum Association, *Statistical Handbook*, Section VIII, Table 5.
Cols. 12: Exhibit R-17, IV-3, pp. 1-8 plus Petro-Canada's acquisition of British Petroleum.

(i) Entry

(1) New refineries were built both by existing firms and by firms new to the industry. A total of 29 new refineries were constructed between 1950 and 1984, 16 by new firm entrants and 13 by existing refiners. Over half the new refineries were built in the 1950s, but over 50 per cent of new refinery capacity came in the 1970s due to the larger average size of the more recently built refineries. The four majors were responsible for 5 of the 13 new refineries, or 47 per cent of new refinery capacity, since 1960.

(2) Of the 16 new refineries built in the 1950s, 9 were built on the Prairies and 3 in B.C. Thirteen refineries were added after the 1950s, 9 of which were in Ontario, Quebec and the Atlantic region. The five largest new refineries since 1950 were all built in the 1970s — Gulf (Edmonton and Point Tupper, N.S.), Ultramar (St-Romuald, Quebec), Newfoundland Refining (Come-By-Chance, Nfld.) and Texaco (Nanticoke, Ontario). Two of these five refineries are now closed (Point Tupper and Come-By-Chance) due to insufficient export and other markets, while St-Romuald altered its product slate to lighter fuel oils in keeping with changing demand requirements.

(3) Twenty new firms entered as refiners between 1950 and 1984, 16 by building new refineries and four by acquiring existing refineries. Many of these refineries were very small and were designed to serve small local markets.

(4) The number of new firm entrants has declined each decade from 13 in the 1950s to one in the first five years of the 1980s. The average size of new refineries built by new firm entrants increased markedly from the 1950s to the 1970s.

(5) Eleven of the 16 refineries built by new entrants since 1950 were closed by 1984, and only four of those 16 firms still operate refineries — Irving, Ultramar, Suncor, and Turbo Resources.

(6) There have been 22 refinery acquisitions since 1954, including the four by new entrants. Seventeen of the acquisitions occurred in the 1950s and 1960s; in recent years Petro-Canada has been the major acquirer of refineries — the Taylor, B.C. refinery from Pacific Petroleums in 1979, a Montreal refinery from Petrofina in 1981, the Oakville and Ville d'Anjou refineries from BP in 1982, 49 per cent of Gulf's refinery in Port Moody, B.C. in 1982, and all Gulf's operating refineries except for Montreal in 1985. It also acquired a mothballed refinery at Come-By-Chance in 1980.

(7) Energy, Mines and Resources reports that there were 26 expansions of 5,000 b/d or more to existing refineries in the 1950s, 19 in the 1960s and

31 in the 1970s. Some of these expansions involved very substantial investments whereas others were more of a "debottlenecking" nature.

(ii) Exit

(1) From 1950 to 1984 the number of new refineries (29) was more than offset by the number of refinery closures (33), with 18 of the 33 closures taking place since 1970. Thirty-six per cent of the total capacity closed occurred in the 1970s and 59 per cent since 1980.

(2) Thirteen of the 15 closures between 1950 and 1970 occurred in Western Canada and involved, for the most part, very small refineries. Seven of the 11 closures since 1980 have occurred in Eastern Canada. The former represented the replacement of older refineries with larger refineries, while the latter involved the shutdown of surplus capacity due to declining demand. The following 10 refineries have closed since 1982, representing a total over 375,000 b/d or about 19 per cent of Canada's 1982 refining capacity.

1983	Texaco	Montreal
	Petro-Canada (BP)	Montreal
	Gulf	Calgary
	Gulf	Kamloops
	Imperial Oil	Montreal
	Shell	St. Boniface
	Shell	Oakville
	Ultramar	Holyrood
1984	Texaco	Edmonton
1985	Gulf	Montreal

In addition, Gulf's refinery in Clarkson, Ontario, discontinued gasoline production in 1984 and instead began shipping a semi-processed stream to Montreal for finishing.

(3) Each of the 15 refineries closed in the 1950s and 1960s had less than 5,000 b/d capacity. The average size of the closures increased, particularly in the 1980s.

(4) Both new entrants and existing firms closed refineries. As noted above, 11 of the refineries built by new entrants had been closed by 1984. Thirteen of the 18 refineries that were closed between 1970 and 1984 were closures by majors. By 1984 about 78 per cent of the total capacity closed since 1950 was due to actions taken by the majors.

When a refinery is closed it is either dismantled or "mothballed" in whole or in part, depending upon possible uses for, say, its storage tanks as terminal capacity, or the possibility that the owner may wish to reactivate it in the future. There may on occasion also be public relations reasons for a company preferring to mothball a refinery temporarily. Even with proper mothballing, however, which is expensive to institute and maintain, physical deterioration of equipment gradually occurs. Two refineries that have been preserved in a mothballed state for some time are Come-By-Chance (since 1976) and Point Tupper (since 1980). Both the refineries, as well as large portions of the capacity of Ultramar's St-Romuald and Irving's Saint John refineries, were established mainly to supply heavy oil products to the northeastern United States. These markets were substantially lost by the late 1970s.

The history of entry into Canadian gasoline refining appears to show that, in order to survive, a degree of vertical integration with marketing is a virtual necessity. The urge to reduce risk by having a number of captive retail outlets has led to a high degree of vertical integration by equity ownership and by many long-term supply contracts between refiners and large retail organizations. This in turn appears to have foreclosed so much of the demand from a new entrant that locking up its own captive outlets for a significant portion of its own refinery output becomes essentially a condition of entry. The Come-By-Chance refinery had to close, partly for want of gasoline markets, and Pacific Petroleums had to scramble to build or acquire sufficient captive marketing capacity to support its Taylor refinery once it was built. One refining witness advised the Commission that as a matter of business prudence a refinery ought to have sufficient captive retail demand to take up at least 50 per cent of the refinery's capacity. The implications of vertical integration are considered elsewhere in this report; suffice it to note here that while vertical integration can impose a barrier to entry into refining, and this barrier has grown with the average size of refineries, it has not been such as to prevent a reasonable degree of ongoing entry into the refining sector. One source of potential entry, illustrated recently by Turbo, is backward integration by large marketers.[3] Another source is existing refiners who have the expertise and resources to expand by acquisition or otherwise if opportunities arise.

As described above the refining sector has experienced considerable entry and exit over the period examined. Many of the new firms which entered have since exited by sale or closure. Entry was particularly brisk in the 1950s and 1960s when it was possible to compete in an expanding market with smaller scale refineries. By the 1970s as market boundaries expanded due to the extension of product pipelines, and as changing product requirements necessitated more sophisticated and expensive refinery equipment, entry took place with larger scale plants and the smaller refineries began to close. Although fewer firms were involved, considerable capacity was added to the system as a whole.

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[3] At least two other large marketing organizations, Mohawk and Murphy/Spur, gave detailed consideration in the late 1960s and early 1970s to building refineries in Canada, but both eventually decided not to do so.

The extent to which history is a guide is influenced, however, by the extent to which underlying conditions in the industry have remained the same. The principal changes in the industry has been the slowdown in its rate of growth in the late 1970s and the substantial decline in sales experienced after 1980. Until the mid-1970s the growth in sales of petroleum products far outstripped the growth in the economy. The reverse situation has prevailed during the last few years and appears likely to continue for some time. The difficulties of having to overcome the need to add a large amount of capacity at the refining and retail levels are most easily overcome during periods of rapid growth, when existing firms may have to yield market share to new entrants but do not necessarily have to surrender any existing sales and may even experience significant growth. Perhaps a case in point is Ultramar, whose growth has depended heavily on acquisition of marketing outlets. In recent years the shift in product demand has required Ultramar to upgrade the product slate of its St-Romuald refinery and to look to increased gasoline sales, which has created some of the same pressures that might be caused (and faced) by an entrant. Ultramar's most recent significant acquisition was Gulf's marketing outlets in Quebec and the Atlantic Provinces.

It is unrealistic to view either entry or exit, or new investment or closures, in isolation. All are part of an overall rationalization process in the industry as it adjusts to the push and pull of the various economic forces to which reference has been made elsewhere. The process of upgrading capacity, increasing and decreasing it, and shifting it geographically, that has taken place continuously across Canada has not been within the direction or control of a few companies.

(d) Capacity Utilization

Operating costs per unit of output decrease as the size (scale) of plant increases, and as refineries of a given size operate at greater capacity utilization. These economies were put forward by the refiners as justification for entering into supply arrangements with their competitors.

Data on the capacity utilization of refineries relates to unit costs, which are kept low by operating at or near full capacity, to the extent of supplies which may be potentially available to unintegrated marketers when refineries are working at less than full capacity, and to the pressure which excess capacity exerts on prices.

Table X-5

Canadian Petroleum Refinery Capacity Utilization by Region, 1971-1984 Percentage[a]

Year	Atlantic	Quebec	Ontario[b]	Prairies	BC/NWT	Canada
1971	67.9	80.4	97.3	77.8	100.8	84.4
1972	83.6	89.3	91.1	78.9	100.8	90.9
1973	71.3	92.4	99.5	91.3	108.0	90.6
1974	85.3	82.8	86.7	97.5	100.0	86.9
1975	75.5	79.1	82.8	89.2	93.6	81.5
1976	48.1	85.0	82.8	86.9	91.2	79.3
1977	51.6	86.3	79.9	89.0	90.6	83.8
1978	62.9	85.0	72.2	86.7	89.4	81.0
1979	63.9	75.0	80.6	88.7	89.6	87.3
1980	74.9	80.9	89.2	100.3	98.0	87.8
1981	60.9	80.4	81.7	95.5	95.8	81.4
1982	39.3	78.4	70.7	73.1	89.1	72.0
1983	40.3	89.6	80.7	74.8	84.3	76.7
1984	41.0	82.2	85.5	74.6	89.5	76.3
Annual Average 1971-1984	61.9	83.3	84.3	86.0	94.3	82.9

Notes:

a. Measured as feedstock actually processed as a per cent of total capacity.

b. Figures for Ontario have been adjusted to exclude Petrosar, a petrochemical refinery.

Source: For regions, Statistics Canada, *Refined Petroleum Products*, Cat. No. 45-004, Energy, Mines and Resources, *Petroleum Processing in Canada*, Dec. 1981. For Canada, Canadian Petroleum Association, *Statistical Handbook*, Section VIII, Table 6, June 1985. Data for Canada and the regions are not strictly comparable as they come from different sources. Data for Canada exclude Petrosar.

Capacity utilization by region from 1971 to 1984 shows distinct differences, highest on average in BC/NWT, high in the Prairies, Quebec and Ontario, and frequently very low in the Atlantic provinces. The impact of the 1981 recession is reflected in these data, which would reveal still lower capacity utilization if there had not been the refinery closures in 1983, especially in Quebec. The less than 50 per cent capacity utilization in the Atlantic provinces reflects in part the configuration of the Irving refinery, which can close down one or two distillation units and still operate a third unit.

Overall the data show that on a national basis refineries operated at over 85 per cent of capacity for 17 of the years since 1950 (Appendix G Table 4).

The most recent decade has seen lower levels of capacity utilization as the economy has adjusted to both higher crude oil and product prices and a severe recession. The adjustment has taken place largely by way of refinery closures although low levels of capacity utilization have continued in some regions of the country. Inter-refiner supply arrangements of all kinds, including exchanges, are another means of facilitating adjustment in opening, closing, expanding and downsizing refineries which would otherwise be more difficult to effect. As an adjustment device they contribute to the more efficient use of resources.

Throughout the period covered in Table 5 surplus refining capacity has been available each year in almost all regions of Canada to supply additional demand. Apart from the unusual difficulties with refinery equipment and fires experienced in 1979, short-term difficulties in meeting the demand for unleaded gasoline, and subject to negotiation of mutually satisfactory prices, if supply was not available to unintegrated marketers it must have been due to refiners refusing to supply independents (as is the stated policy of Irving) or to refiners being unwilling to process in order to supply resellers' needs, rather than being due to an inability to supply. The operation of refineries during the past decade with significant unutilized capacity, despite closures, downsizing and the use of supply arrangements, represents some waste of resources. Not all unutilized capacity is undesirable, of course, because it would be impossible, and undesirable, to be running at 100 per cent capacity utilization all the time without any ability to supply additional demand or to meet unplanned production interruptions.

(e) Profits

The Commission also reviewed profit rates in the refining sector because if an industry enjoys sustained profits or returns on investment that are higher than those of other industries with comparable risk, barriers to entry may exist that should be examined. As set out briefly below, the data, although not entirely satisfactory, do not indicate a problem with the state of competition in the sector.

The problems of analyzing profits are many and well documented. They include the interpretation of accounting conventions in the treatment of depletion and depreciation expenses; the conversion of accounting profits to an economic concept of profits; and the comparison with other standards in order to see whether there appear to be unreasonable barriers keeping others from seeking similar profits in the industry. Interpretation problems are compounded by the fact that some firms with market power may deliberately reduce their accounting profits in order to avoid attention or discourage entry. Also, it has been alleged in this inquiry that profits to Canadian subsidiaries of crude oil producers were at times shifted offshore by means of charging high transfer prices for imported crude oil. In such instances some offshore revenues were returned to Canada as dividends, further complicating the analysis.

There are two basic statistical problems in attempting to measure refining profitability. First, virtually all refiners are vertically integrated with marketing operations and do not themselves separate the two sectors financially in a way that facilitates individual assessment. Second, corporate data of refiners are only publicly available for corporate entities, virtually all of which are engaged in substantial non-refining activities in addition to refining. This is, for example, true of the figures published in Statistics Canada No. 61-207, *Corporate Financial Statistics*, which are drawn from data collected on a legal entity basis for the Petroleum Industry (SIC 365) alone. Profit data on Petrosar, which are included in this publication, constitute a further impurity because Petrosar produces mainly petrochemical products. The data in *Corporate Financial Statistics* are nevertheless the best approximation that can be made of refining profitability based on published statistics.

The return on both shareholders' equity and total capital employed for each of three five year periods from 1968 to 1982 are shown in Table 6 for the Petroleum Industry (SIC 365), for all manufacturing industries, and for the yield on 3 to 5 year Government of Canada bonds.

Relative to a risk free investment in government bonds the return on shareholders' equity and on capital employed in the petroleum industry increased from 1968-72 to 1973-77, but then reversed and in 1978-1982 a higher return could be earned from government bonds than from an investment in the industry. Over the whole period 1968-1982 there was an 18 per cent higher rate of return on shareholders' equity in the petroleum industry than on bonds (Col. 6).

Relative to the return in all manufacturing, the return on shareholders' equity over the whole period was an average of 5 per cent higher, while the return on capital employed was 6 per cent lower in petroleum than in all manufacturing. Throughout the decade 1968 to 1977 the return on capital employed was remarkably similar in petroleum and all manufacturing, while after 1977 the return was lower in petroleum on shareholders' equity and on capital employed (Cols. 8 and 9).

Table X-6

Return on Shareholders' Equity and Capital Employed for the Petroleum Industry (SIC 365), All Manufacturing and the Average Yield on Government Bonds, 1968-1982

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Return on Shareholders Equity*		Return on Capital Employed**		Ave. Yield on 3-5 yr. Govt.Bonds	$\frac{(1)-(5)}{(5)}$	$\frac{(3)-(5)}{(5)}$	$\frac{(1)-(2)}{(2)}$	$\frac{(3)-(4)}{(4)}$
Annual Average	SIC 365	ALL MFG	SIC 365	ALL MFG	%	%	%	%	%
1968-1972	8.7	7.8	8.2	8.2	6.7	29.9	22.4	11.5	0
1973-1977	13.4	11.4	11.4	11.4	7.8	71.8	46.2	17.5	0
1978-1982	9.3	10.8	10.2	12.0	12.2	−23.8	−16.4	−13.9	−15.0
1968-1982	10.5	10.0	9.9	10.5	8.9	18.0	11.2	5.0	−5.7

Notes: * Return on equity is defined as net profit after tax divided by book equity. It measures the rate of return on shareholders' investment (paid in capital and retained earnings).

** Capital employed is defined as total assets less current liabilities. The net income figures used to compute rate of return on capital employed have been adjusted by adding the after-tax interest expenses on borrowed funds to net profit after tax.

Source: Statistics Canada, *Corporate Financial Statistics* (Cat. 61-207) Various Years, and *Bank of Canada Review*, Various Years.

4. Supply Arrangements Between Refiners

(a) Context and Nature of the Arrangements

Canadian refiners are vertically integrated and operate extensive wholesale and retail marketing facilities.[4] Just as a refinery involves a continuous flow process, so do the marketing facilities each require a continuous supply of product. The capital investment required for each of the production, transportation and storage elements of this process, and the costs of carrying inventory, are such that utilization rates or sales turnover at each stage have significant financial implications, leading also to an interest in maintaining some reasonable balance between all parts of the system across all the areas in which the company operates.

The detailed scheduling and coordination that such a products supply system requires must be done well in advance, particularly if new investments must be made at any link in the process in order to accommodate or take advantage of technological change, or to accommodate changes in patterns of demand that occur both seasonally and over time. The forecasting of capacity and investment requirements for each link in the system must be continually updated to take account of changing general market conditions or competitive initiatives. Strategic options must be continually evaluated and costed in light of the forecasts and changes. Further, unanticipated interruption or delay at any link in the system, such as a refinery fire, a pipeline or shipping problem, or a contamination problem, may very well affect some or all other links so that an ability to adjust, sometimes on a short term or emergency basis, is required.

The nature of refinery investment, which is at the hub of this process, is such that production capacity is added in much larger lumps than storage or marketing investment tends to add to distribution capacity. Accordingly refinery investment is typically preceded by a need to acquire product from other refiners, and is followed by an interest in selling more product to others than was previously the case. This results in an ongoing but changing need for refiners to have a variety of supply arrangements with other refiners in order to reduce the overall cost of product supply within their own system.

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[4] This observation does not apply to Petrosar, which produces gasoline in limited quantities and solely as a by-product of its petrochemical feedstock production. Also, Federated Co-operatives is not vertically integrated in the normal sense in that it is owned by a large number of retail co-operatives who only purchase petroleum products from FCL to the extent that the financial incentives of membership induce them to do so.

The types of adjustments to supply patterns that must be made from time to time can be illustrated with reference to some of Gulf's major refinery investment decisions from the late 1960s to the early 1980s. Gulf had an extensive marketing network across Canada at all relevant times. When it acquired Anglo-Canadian in 1950 it obtained Anglo-Canadian's small refinery in Brandon, Manitoba. When it acquired Royalite in 1962 it obtained Royalite's small refineries in Kamloops and Saskatoon. With the changing pipeline configuration in Western Canada for both crude oil and refined products, Gulf decided to consolidate its Prairie region production into a larger, more efficient refinery at Edmonton which it opened in 1971 (about ten years after the planning process had begun). In conjunction with opening the new refinery it closed its refineries at Saskatoon and Brandon and converted its refineries at Moose Jaw and Calgary into asphalt plants. Subsequently, from 1979 to 1984, Gulf expanded its Edmonton refinery from about 80,000 b/d to 118,000 b/d, closed refining facilities in Kamloops and Calgary, and sold a 49 per cent interest in its underutilized refinery in Port Moody to Petro-Canada. As for Eastern Canada, in the early 1970s Gulf perceived a significant profit opportunity selling residual fuel oil to the northeastern United States and built a refinery at Point Tupper, Nova Scotia which, while it also produced gasoline and had general storage facilities, depended for its viability on the American heavy oil market. In the late 1970s, however, Gulf found it could not compete with alternative sources of fuel oil supply from the Caribbean and elsewhere, and in late 1979 it lost its Iranian crude oil supply which had been the prime feedstock at Point Tupper. In 1980, rather than remodel the Point Tupper refinery to suit a Canadian market that was already adequately supplied, and seek to establish new supply and new customer relationships, it closed the refinery. In 1983 Gulf also closed down part of the capacity of its Montreal and Clarkson refineries.

Each of the major refinery investment decisions referred to above represented important strategic judgements made in a changing market context with a view to Gulf's long term competitive position. Each required Gulf to alter its supply arrangements, sometimes by entering into contracts with other refiners where that was the most economical course of action. For example, when it closed its Point Tupper refinery it still had two or three years left on a large contract to supply fuel oil to Nova Scotia Power, an obligation it fulfilled in part from Point Tupper inventories, in part from its Montreal refinery, in part by imports and in part by entering into a short-term processing agreement with Irving.

In order to improve its utilization of available production capacity or to ensure adequate supply to its marketing outlets each refiner enters into bulk product supply agreements with other refiners from time to time. The basic types of supply arrangements that refiners enter into with each other are relatively straightforward. Refiners trade or exchange product with each other, purchase and sell product from and to each other, occasionally process crude oil at one of their refineries for another refiner who lacks convenient refining capacity, and store product for each other. Only one of those types of agreements, namely, processing agreements, necessarily involves a refiner as a party. However, and although the other types of agreements are sometimes entered into between non-refiners, the large volumes of product that move in bulk pursuant to the agreements move between two refiners or, to a lesser extent, between a refiner and a non-refiner. This is partly because refiners are the ultimate domestic source of products and partly because they have invested more heavily than non-refiners in the storage, loading and transportation facilities required for bulk product movements at numerous locations. They also have extensive marketing networks.

The four types of arrangements are described more fully below, although it should be understood that none of the contracts is standard in form. Each is individually negotiated and they are often fairly complex in detail.

(i) Exchange

Under an exchange agreement one party supplies product to the other at a specified location or locations and times, in return for receipt of product from the other at specified locations and times. The two-way supply and receipt obligations are reciprocal in that they are interdependent; the entering into and performance of one is contingent upon the entering into and performance of the other. Interdependent or reciprocal supply tends also to involve substantially similar products in substantially similar volumes, although the extent of matching occasionally varies somewhat in view of differing needs and supply capabilities of the parties at the relevant locations and times.

Typically in product exchanges the product delivered by one party is largely or wholly paid for in kind, with like product being swapped or traded in return by the other party. A relatively small amount of money frequently also changes hands to adjust for significant differences in feedstock costs, product delivery locations or delivery arrangements, or for product volume differences. One result of this process is that production costs rarely enter into the negotiations and each party in effect receives product from the other at its own production cost. This occurs despite the fact that production costs usually vary to some degree between refineries according to feedstock and other inputs, nature of the refining assets, size of refinery and the level of capacity utilization at the time.

Depending upon the extent of volume matching, therefore, an exchange arrangement may have a greater or lesser component of ordinary product purchase and sale in it, or indeed of reciprocal purchase and sale. The more the volumes tend to match, the greater the industry inclination to refer to the deal as an "exchange" rather than a "purchase/sale", but both involve reciprocal supply and since the early 1970s there has been a greater tendency than previously to assign dollar values to the product. Similarly, the extent to which product is traded rather than purchased/sold, and the way the overall arrangement is written up, are more matters of form than of substance. Federated Co-operatives Limited, for example, obtains tax advantages if its reciprocal supply arrangements (or "exchanges") with other bulk suppliers are in the form of trades of product rather than purchase/sale, and for that reason it prefers to structure them accordingly. For various business reasons the overall arrangement may also be embodied in one or more agreements.

Exchanges may also take the form of reciprocal processing agreements (described below) with approximately balanced supplies.

Refiners or other large wholesale suppliers will typically have a number of evergreen (automatically renewing) short-term emergency exchange agreements, pursuant to which each party agrees to do its best to supply the other in the event of an emergency. Volumes are not specified in these types of agreements. Indeed, in the absence of some emergency that results in a supply interruption for a firm, product does not actually move under this type of exchange agreement. Unlike other types of exchange agreements, emergency exchanges are typically entered into between refiners in the same geographical market.

(ii) Purchase

From time to time refiners purchase product from others and pay for it like any other buyer, without any reciprocal supply conditions, although in the case of refiners these one-way agreements tend to be of short duration and for relatively small volumes to meet a temporary imbalance between their supplies and their supply commitments. As discussed further below, a more enduring or significant imbalance would tend to be addressed by a refiner through a reciprocal supply arrangement that benefitted the utilization rate of one of its refineries somewhere in the country and provided an additional measure of price and supply security.

(iii) Processing

Under a processing agreement a refiner refines, or "processes", someone else's crude oil or other feedstock for a negotiated fee per barrel and provides the refined products to that other person. Relatively large volumes tend to be involved.

Processing agreements vary considerably in detail, as one might expect of any complex type of agreement. As put by one refining witness:

> Elements normally defined in processing agreements would be the term, the notice period, the volumes, the types of crude, who buys and delivers the crude, the product yields from each crude, the product specifications, the procedures for dealing with minor variances in qualities of the crude around its main specification, the profile of deliveries, offtakes and allowed variations, inventories of crude and products and minimum and maximum allowed, and procedure for dealing with deviation, over/under lift procedures, yield balancing, lifting arrangements, procedure for banking excess over minimum and so on.

Sometimes the processee assumes responsibility for obtaining the feedstock, and sometimes the processor does so and is reimbursed separately for that cost. Typically the feedstock is commingled with other refinery feedstocks. The processee rarely in fact takes the actual "full barrel" of refined product, and the terms of the bargain are affected by the particular product slate and volumes he receives. Usually the products are delivered or picked up from general commingled refinery storage or other delivery location or locations according to an agreed schedule.

Processing agreements are frequently entered into on a reciprocal basis, in which event of course both parties are refiners. When reciprocal processing is not involved, the parties may still prefer a processing agreement to a straight purchase if the processee has feedstock or transportation available to it on terms that are not available to the processor for some reason. Also, a processee may prefer to purchase crude oil or to be classed as a "refiner" in a particular province for reasons having to do with provincial government policies.

(iv) Terminalling

Under a terminalling agreement a firm having bulk storage and handling facilities agrees to receive product, store it and redeliver it to the same firm according to an agreed schedule in return for a negotiated fee which is commonly called a "throughput" fee. Although refiners tend to classify terminalling arrangements as product supply arrangements, a terminalling arrangement is really more like a sophisticated warehousing service. No title to product changes hands, despite commingling, so it differs in that respect even from a typical processing agreement.

Bulk storage facilities are an essential part of a petroleum products distribution system whether the product is refined in Canada or imported. Some tank storage capacity exists at a refinery, and typically product is moved from refineries by pipeline, ship or rail to large, or "primary", storage terminals. From there it goes by rail or truck to smaller "secondary" storage terminals. Imperial Oil, for example, as of 1981 owned and operated five major refineries, 62 primary bulk terminals and 735 secondary distribution terminals across Canada. Some nearby customers pick up product directly from bulk storage facilities, and others receive it from delivery vehicles into smaller privately owned storage such as in-ground storage tanks at service stations, or farm or industrial tankage.

The investment in terminal storage include the land, licences, tanks, loading and unloading facilities, maintenance and so on, and are affected by the need to segregate types of product and by differing seasonal demand patterns among different products. Rates of sales turnover or throughput are an important cost consideration and, accordingly, the sharing of terminal capacity is often in the economic interest of both the owner and other refiners or distributors. Most terminalling arrangements relate to the larger, more expensive, primary terminals.

It may be seen, then, that reciprocity can be a condition of each of a product supply, processing or terminalling arrangement.

(v) Some Examples

The number, nature and duration of inter-refiner supply arrangements varies with each refiner and may be illustrated by reference to the agreements that have been entered into by Imperial Oil (one of the largest refiners), Texaco (a smaller integrated major) and Federated Co-operatives Limited of Regina (one of the smallest refiners). The detail of current arrangements is usually treated by the parties as commercially sensitive and therefore confidential.

Imperial Oil has historically maintained a strategy of self-sufficiency in refined products so that one way or another, and by utilizing exchange agreements, its marketing outlets from coast to coast can be supplied totally by its own domestically refined product. Imperial nevertheless finds it necessary, in order to minimize its overall cost of product supply and to utilize the capacity of its facilities, to enter into a variety of product supply agreements with both refiners and other suppliers. It has entered into all the basic types of supply agreements from time to time as its requirements have dictated. A summary description of its supply agreements from 1979 to 1981,

Table X-7

Summary of Contract Receipts Under Imperial Oil's Domestic Supply Agreements

	Less than one year duration				One year duration or more				Total Agreements			
	Number of Companies	Number of Agreements	Estimated	Volume	Number of Companies	Number of Agreements	Estimated	Volume	Number of Companies	Number of Agreements	Estimated	Volume
			1,000B	%			1,000B	%			1,000B	%
1979												
Non-Refiners	12	43	1,903	19	3	3	1,654	12	13	46	3,557	15
Refiners	12	114	8,186	81	9	20	12,360	88	12	134	20,546	85
Total	24	157	10,089	100	12	23	14,014	100	25	180	24,103	100
% of Totals		87%	42%			13%	58%					
1980												
Non-Refiners	8	19	1,211	19	3	3	1,724	12	11	22	2,935	14
Refiners	11	75	5,261	81	9	20	12,115	88	12	95	17,376	86
Total	19	94	6,472	100	12	23	13,839	100	23	117	20,311	100
% of Totals		80%	32%			20%	68%					
1981												
Non-Refiners	10	21	1,695	25	3	3	1,742	12	12	24	3,437	16
Refiners	11	76	5,114	75	10	27	13,133	88	12	103	18,247	84
Total	21	97	6,809	100	13	30	14,875	100	24	127	21,684	100
% of Totals		76%	31%			24%	69%					
3-Year Average												
Non-Refiners	10	28	1,603	21	3	3	1,707	12	12	31	3,310	15
Refiners	12	88	6,187	79	9	23	12,536	88	12	111	18,723	85
Total	22	116	7,790	100	12	26	14,243	100	24	142	22,033	100
% of Totals		82%	35%			18%	65%					

Source: Evidence of Imperial Oil.

and further detail for 1974 and 1981 regarding those agreements that involved gasoline and distillates, appear in Tables 7 and 8.

As shown in the Tables, Imperial Oil had an average of 142 different supply agreements in force in each of the years 1979 to 1981. Most of the agreements by number (approximately 80 per cent) were of less than one year duration (although many of these might contain evergreen clauses or otherwise be renewed from year to year). In total those short-term agreements accounted for only about a third of Imperial's total exchange volume. Imperial had supply agreements of one form or another with each of the other Canadian refiners and with about an equal number of non-refiners, although in product volume terms approximately 80 per cent of its dealings

Table X-8

**Imperial Oil's Supply Agreements:
Motor Gasoline Plus Distillates,
Contracted Receipts and Number of Agreements***

	Volumes Received			Number of Agreements		
	1000 barrels					
	Non-Refiners	Refiners	Total	Non-Refiners	Refiners	Total
1974						
Receipts from						
Exchanges	497	1,076	1,573	1	3	4
Purchase/Sales	—	8,466	8,466	—	6	6
Processing	—	—	—	—	—	—
Purchases	82	1,006	1,088	1	1	2
Total	579	10,548	11,127	2	10	12
1981						
Receipts from						
Exchanges	1,503	5,007	6,510	1	12	13
Purchase/Sales	—	6,831	6,831	—	8	8
Processing	—	—	—	—	—	—
Purchases	201	—	201	1	—	1
Total	1,704	11,838	13,542	2	20	22

* Agreements of one year or longer.

Source: Evidence of Imperial Oil.

were with refiners. According to Imperial's evidence most of its shorter term agreements are made for the purpose of covering planned or unplanned disruptions in refinery or delivery systems. This may explain the larger number of short-term agreements in 1979, which was a year of many refinery breakdowns and supply disruptions in Eastern Canada. As to its longer term arrangements, lasting more than one year, Imperial stated in evidence:

> Longer-term agreements generally cover a period of one to three years and are often renegotiated after that period. Agreements of this kind frequently enable a company to serve a market where its facilities are inadequate or non-existent, or where there may be long-term opportunities to reduce the cost of supplying the market.

Overall, 16 per cent of Imperial Oil's total deliveries to wholesale or retail distributors in 1981, (a sample year examined in greater detail than some others) were of product received from other companies, although it also delivered a comparable volume of gasoline and distillate (approximately 20 million barrels) to other companies in that year. Of the 16 per cent, over half was pursuant to longer term exchange agreements (one to three years) with other refiners.

As of June, 1983 *Texaco Canada* had 17 exchange agreements in place. Thirteen were structured as product exchange agreements and four as purchase/sales. Eleven agreements had terms of one year, two had terms of two years, three had terms of three years and the remaining agreement had a four year term. The agreements represented approximately 19 per cent of Texaco's total product volume, although three of them accounted for 68 per cent of the total volume exchanged.

Later in 1983, effective January 1, 1984, Texaco and Gulf entered into a substantially larger product supply arrangement embodied in seven long term agreements. This new and far-reaching arrangement is the subject of separate comment below.

Federated Co-operatives Limited ("FCL") had seven product exchange agreements in effect at the time its representatives testified. The agreements covered approximately 50 per cent of the total output of its Consumers' Co-operative refinery in Regina. The seven agreements, each of which involved the reciprocal supply of product by Federated Cooperatives at the Regina refinery, were as follows:

1. Turbo provided gasoline and middle distillate to FCL in Calgary.
2. Mohawk (a non-refiner) provided product which it purchased from Imperial Oil to FCL in Edmonton and Vancouver.

3. Petro-Canada provided product to FCL in Taylor and Dawson, and sometimes in Edmonton and Vancouver.

4.&5. FCL exchanged a product entitlement it received from Husky in Prince George, with Chevron, and received product from Chevron in Vancouver.

6. Texaco provided product to FCL in Edmonton and Calgary.

7. Shell provided product to FCL in Vancouver from its Shellburn refinery. (Originally under this agreement FCL had received product from Shell at Shell's St. Boniface refinery, but extension of Interprovincial's product pipeline to Winnipeg resulted in an improved FCL ability to ship product to Winnipeg, and contributed to the eventual closure of Shell's St. Boniface refinery in 1983, so the receiving location was switched to Vancouver.)

FCL's agreements were between one and three years in duration, but most renew automatically subject to one year's cancellation notice.

In addition to its exchange agreements, FCL purchases product from time to time. When its representatives testified before, the Commission FCL had no processing agreements with anyone, either as processee or processor.

The proportion of a refiner's production that it disposes of other than through exchange varies considerably with the particular circumstances, as illustrated above. The point is further illustrated by Petro-Canada's experience as it developed (to 1983), as explained by a Petro-Canada witness:

> In 1981, some 50 per cent of our initial availability was directly used by us in our marketing and 50 per cent was re-obtained, if I may say so, through exchanges and purchases and sales agreements. In 1982 if we add BP to what was Petro-Canada, some 70 per cent was directly used and 30 per cent obtained through exchange and purchase and sales agreements. If we exclude BP, some 45 per cent was directly used and 55 per cent was re-obtained under exchange agreements or purchase and sales agreements.

(b) The Rationale for Reciprocity

If a refiner wishes to have product available for sale in a market other than that supplied by one of its own refineries it must either obtain that product from someone else, transport the product from one or more of its existing refineries, or build a new refinery. It will have several objectives. First, it wants a favorable laid-down cost of product in the market, and preferably a price over which it has some ongoing control. Second, it wants reliable supply because great damage can be done to a marketing organization if supply is interrupted, or even if an interruption is risked. Third, it may wish to use its demand for product in the distant market to improve the capacity utilization of one or more of its existing refineries by obtaining product from someone who is willing in return to obtain product from it. Each of these objectives has significant financial implications in terms of its costs of marketing and refining, as of course do the transportation or capital investment options. Significant financial implications in turn, together with the availability of assured supply, have competitive implications.

It is desirable that refiners be able to obtain product for their marketing organizations in markets distant from their refineries without having to transport the product, because of the real-cost savings in transportation. Their presence in the distant market may enhance competition in that market. The question however is, why do refiners have a preference for reciprocal supply arrangements instead of simply purchasing product like any other reseller, and what are the market effects of that preference? Does it result in any foreclosure of others or does it dampen competitive forces in any other way? If so, does the actual or potential harm outweigh the benefits?

No evidence was given as to swaps or other forms of reciprocal product supply between manufacturers or other suppliers in other industries, let alone as to why reciprocal supply might be characteristic of some types of industries and not others. The Commission understands, however, that swaps are not uncommon in at least the iron ore, inorganic chemicals, gypsum and aluminum industries, and that firms that employ such arrangements are usually vertically integrated. It might also be expected that reciprocity would tend to involve comparable volumes and comparable quality of product.

The Director's view was that "the only purpose served by reciprocity is the control of competition". His grounds for that proposition are examined below. The Director did not suggest that refiners should not own retailing capacity in markets distant from their own refineries or storage facilities, or that they should incur the transportation costs of moving product from their refineries or storage facilities to those distant markets. He did however submit that the markets would work better if each refiner simply disposed of its refinery output and acquired any additional product by ordinary independent contract in the same way as would any supplier who did not have distant marketing outlets, so that in those distant markets its marketing organization would simply purchase from local suppliers in the same manner as other competing resellers in those markets. Among other things this would put resellers in each local market on a more comparable volume discount and cost footing, determined by reference solely to supply and demand factors in those markets. It would help avoid risks of preferential access to product in times of scarcity.

The refiners urged that reciprocal agreements were entered into for entirely *bona fide* reasons and with economic effects that were in the public interest. Several rationales were advanced but most, such as the reduction of transportation costs, lower unit costs and competition in distant markets, were common also to non-reciprocal arrangements. Only two rationales related directly to reciprocity as such, namely, an improved degree of security of the arrangements and, at times, improved terms of the bargain.

The first of these two rationales is that reciprocal or interdependent agreements provide an additional measure of security, over and above that of an ordinary contract, for both the demand for the refinery output and the supply for the distant marketing outlets. The security lies in retaining power within your own hands to cope promptly and effectively with a supply interruption on the part of the other party, whether of an opportunistic or fortuitous nature, without waiting to resolve disputes about fault or legal entitlement. Each party holds the other hostage and the extra measure of security facilitates long term planning, both by the refinery and by a large marketing organization, by making long-term volumes and prices of supply more predictable. This represents a cost saving.

The mutual hostage argument is strongest where transportation is a viable alternative to the exchange agreement. The fact that transportation is economically feasible also means that the refinery supply-and-demand balance is likely to be similar in the market areas covered by the agreement(s). When the supply-and-demand balance in the affected markets is asymmetrical, the mutual captive argument breaks down. Then the supplying firm in the market where there is high-capacity utilization and relatively high wholesale prices might find it advantageous to break the agreement. It would depend on how much lower the wholesale prices, which it would have to pay to obtain supplies, were in relation to those it could obtain by selling the same volume.[5]

The second rationale was stated by Mr. West of Petro-Canada, who had previously worked with Imperial Oil: "you can sometimes get a better deal through a reciprocal exchange". One implication of this is that vertically integrated buyers of product can sometimes get better terms than unintegrated buyers by tying their supply to their demand.

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[5] Allowing for asymmetrical conditions in the position of the parties to the reciprocal agreement raises a point implicit in the discussion in the text that is sometimes overlooked. At one level of discourse it may be convenient to refer to the participants in an exchange agreement as obtaining their supplies at their own marginal, average variable, or average cost. It is, however, more exact to refer to the cost of the balanced supplies which they received under the agreement as equal to the opportunity cost of selling the amount of product in question in the market area served by the respective refineries. Taking into account the effect on wholesale prices of offering the additional supplies, depending on market conditions the opportunity costs may be above or below any of the various unit-cost levels.

Refiners who testified indicated that their preference for reciprocal agreements related to each of the three objectives referred to above, namely, laid-down cost control in the distant market, security of supply in the distant market, and the use of one's own marketing demand to improve one's refinery utilization. None of these objectives is inconsistent with competitive markets.

Costs can be assumed to vary to some degree among refineries, although evaluation of costs is complicated by differing ages of refining assets, differing levels of refining capacity utilization and differing supply cost alternatives that are available to meet one's product requirements in distant markets. As to the latter, for example, establishment of the Interprovincial products pipeline on the Prairies meant that Shell derived little competitive advantage from having the only refinery in Manitoba prior to its closure of its St. Boniface refinery in 1983, and Federated Co-op derives little advantage from being the only gasoline refinery in Saskatchewan. In any event, if costs and wholesale prices varied significantly between refineries one wonders why the high cost refiner would want to trade product with the low cost refiner. He would then have a competing marketer with costs lower than his own, and he would have to compete in the distant market with costs higher than the other. The answer may lie partly in the fact that costs between parties may not vary significantly, partly in the fact that each party is competing against others as well as the other party to the agreement, and partly in the competitive pressures and supply alternatives that exist in the market at the time, as exemplified by the Taylor Flats example referred to below.

The two claimed advantages of reciprocity suggest that it may tend to encourage and support vertical integration over wide geographic areas in the sense that it links a refinery to marketing capacity that is outside the normal supply orbit of the refinery.

(c) Effects on Competition

i) Co-ordination Among Competitors

(aa) General

The Director's discussion of inter-refiner supply agreements, both in his Green Book and to a lesser extent in his final argument, was characterized by language such as "mutual forebearance", "interdependence", "joint market power", "mutual objectives", "oligopoly discipline", "coordination", "network" and the like. Despite being challenged to support the inferences implied by these characterizations with specific evidentiary references, however, the support referred to in the Director's final argument was extremely thin.

In an industry such as petroleum refining, where a relatively few competitors make very substantial investments and the product is of such general commercial significance to the economy, a great deal of information, some specific and some general, will inevitably be known by each firm about each of its competitors and about the industry as a whole. Much information is publicly available through the trade press, Statistics Canada, EMR, submissions to regulatory boards and the like, and is systematically collected and analyzed by each firm. So, for example, each firm quite properly knows a fair amount about each of its competitors' refineries — its configuration and age, its types of feedstocks, its bottlenecks, its rated capacity, its utilized capacity in general terms at any point in time, the main characteristics of the demand it supplies and so on. Short-term and long-term industry demand and supply forecasts abound. In terms of specific information exchange, no joint business venture such as a pipeline can be operated, or supply agreement negotiated, without discussing the volumes to be supplied, product specifications and times and locations of transfer. Provision of this type of information, however, without more, is unavoidable and does no harm to the competitive operation of markets.

Two important general features of inter-refiner supply agreements should be noted, based on the numerous such agreements in evidence before the Commission:

1. With one possible exception that is no longer in force, none of the agreements or unwritten understandings referred to in evidence contains any commitment or assurance regarding prices on the resale of product, the maintenance of existing market shares, restriction of output or refinery investment.
2. Inter-refiner product supply arrangements are always or virtually always bilateral in nature. Over the industry as a whole they may be interdependent or form a network in a broad sense that is equally descriptive of the mix of supply arrangements found among all the participants in many industries, but there is no general coordination resulting from a policy, agreement or understanding among more than two firms. Beyond the interdependence of specific bilateral commitments between the same two parties there is no interdependence underlying the willingness to offer supply and to continue supply. For example, continued perform-

ance under a reciprocal Texaco-Gulf arrangement would not be dependent upon continued performance under a reciprocal Shell-Texaco arrangement.

It is understandable that a refiner would not close down operating production capacity without making alternative supply arrangements for product to meet the demand of its own marketing outlets and other supply commitments that had previously been met from that capacity. The options are fairly limited: the refiner can shift the demand directly to another refiner, it can relinquish the demand over time by not renewing supply contracts and by selling its own retail outlets, it can transport product to the area from its nearest available source, or it can acquire the needed product from another refiner. This latter option may be the most attractive, particularly if a reciprocal arrangement can be made with another refiner that will improve the extent of capacity utilization at another refinery. That other refiner may also be attracted by the economics of closing down all or part of its own production capacity in another region.

And so it is not surprising that the refinery closures of 1983-1984 were accompanied by certain new inter-refiner supply agreements that, in view of the investment implications of maintaining a refinery as the principal supply alternative, tended to be of a longer term than other supply arrangements.

With one possible exception in the 1960s the Commission is not aware of any commitment or indication being given at any time by any refiner regarding future addition to or reduction of its refinery investment. In several instances of recent refinery closure counsel to the Commission and counsel for the Director, the latter of whom was at times accompanied by his advisers, reviewed the confidential files of the refiners in question that related in any way to closure of the refinery and to the negotiation of alternative supply arrangements. These reviews were conducted on the basis that if material or information was found that in the view of either counsel was relevant to an issue before the Commission, then that information or material would be placed in evidence. Accordingly the Commission is satisfied that a thorough examination of these matters has taken place.

There was no evidence that any significant information is exchanged, or promises made, in the course of negotiating reciprocal agreements, that is not also necessarily given in the course of negotiating non-reciprocal supply agreements. Of course, if a refiner or anyone else wishes to disclose to competitors information that is normally commercially sensitive, or to enter understandings of questionable legality, there are innumerable ways of doing so apart from doing so in the context of negotiating an agreement on another matter.

Industry witnesses did testify to the fact that as the scale of capital investment required for refining, and the risk, has increased there has been an increasing tendency for two refiners to seek to cooperate on a joint venture basis. For example, when the Scotford refinery was initially being planned it was to be a 60/40 joint venture by Shell and Husky; after Husky withdrew, Shell decided to proceed on its own. There is nothing wrong in principle with these limited forms of cooperation; indeed to the extent that inter-refiner supply agreements facilitate the achievement of economies that would otherwise not be realized, without restrictions on investment or output, they facilitate useful industry adjustment.

Like other economic arrangements such as mergers there are positive benefits from exchange agreements that flow to the parties and, in most circumstances, to the public as well. The potential negative aspect of exchange agreements from a competition policy standpoint is that the supply in the area covered by the agreement is potentially reduced by the amount of the product covered by the agreement. In the absence of the agreement, the refiner receiving supplies might retain an existing refinery, import the product or ship it in from another region, or, in the longer run, build a new refinery. These options are, of course, also affected by normal purchase and sale agreements covering all buyers, be they refiners or non-refiners. Refiners are, however, likely to be the most cost-effective importers (from abroad or from another region) and the most likely potential entrants. Thus the increased duration of and volume covered by exchange agreements in recent years raises a competition policy concern. It is one that must be balanced as best as possible against the positive benefits of increased industry flexibility in adjusting capacity and in meeting demand requirements at lowest possible cost. The Gulf-Texaco agreement discussed below is a case in point.

(bb) The Gulf-Texaco Deal

In 1982 BP and Shell entered into a long-term cross-processing arrangement whereby Shell would process crude oil for BP in Montreal and BP would process crude oil for Shell at BP's Trafalgar refinery in Eastern Ontario. In conjunction with entering these arrangements, BP (which was purchased by Petro-Canada at about the same time) closed its refinery in Montreal and Shell closed its refinery in Oakville. This appears to have been the first such arrangement of this magnitude, but an even larger-scale arrangement between Texaco and Gulf was soon to occur.

Late in 1983 Texaco and Gulf entered into a long-term far-reaching product supply arrangement affecting several regions and consisting of seven agreements, as follows:

1. Gulf would process for Texaco at Edmonton.

2. Gulf would supply product to Texaco out of Edmonton in exchange for product supplied by Texaco to Gulf out of Nanticoke.
3. Texaco would process for Gulf at Nanticoke.
4. Gulf would process for Texaco at Montreal.
5. Texaco would sell to Gulf out of Dartmouth and Gulf would sell to Texaco out of Montreal.
6. Gulf would terminal for Texaco at Clarkson.
7. Texaco would terminal for Gulf at Calgary.

The seven agreements were negotiated together and were clearly viewed by the parties as parts of one comprehensive arrangement. At the same time, the agreements were not all legally interdependent. Assignment of any of the contracts was subject to obtaining the written consent of the other party. Consent could not be "unreasonably" withheld, except that any of the agreements could be assigned by either party to a successor to all or substantially all of its refining and marketing business and assets in the province in which city to which the agreement related was located. Certain exceptions to this latter provision, however, and special provisions regarding termination, gave particular legal interdependence to agreements 3 and 4, to agreement 2 with agreements 1 and 3, to agreement 5 with agreements 3 and 4, to agreement 6 with agreements 3 and 4, and to agreement 7 with agreement 2. Agreements 3 and 4, the Nanticoke and Montreal processing agreements, for example, both provided that the termination of one automatically terminated the other and that neither could be assigned without the simultaneous assignment of the other.

In conjunction with entering into this new arrangement Texaco closed its Edmonton refinery and Gulf discontinued gasoline production at its Clarkson refinery near Toronto.

The Director expressed concern over this arrangement. Although he overstated its effects by saying that Gulf and Texaco thereby "fully coordinated their manufacturing and distribution facilities from B.C. to the Maritimes", he correctly referred to it as "the most significant and highly coordinated rationalization" in evidence short, of course, of a merger.

Texaco and Gulf denied that the series of agreements was anti-competitive in either purpose or effect. In the view of each of them, and to adopt the words of an internal confidential Gulf document, the object of the overall arrangement was to "maintain existing competitive position relative to each other while improving competitive position of both relative to others".

Each explained the particular economic pressures and benefits that for different reasons made the set of agreements attractive to it.

In essence, according to Gulf and Texaco, the comprehensive arrangement enabled each of them to achieve very significant cost savings in refining and physical distribution while maintaining a satisfactory degree of security of supply to their marketing outlets and not restraining their potential growth in any way. The cost savings resulted from eliminating underutilized or relatively high cost refining capacity and from reducing the need for product transportation. Security of supply resulted from the long-term and interdependent nature of the agreements.

From Texaco's point of view the major achievements of the arrangement were as follows:

(a) *Western Canada*. Texaco's western Canadian supply had depended largely on its small, old and relatively high cost Edmonton refinery which it could not expand. In British Columbia its supply had always come from relatively short-term supply agreements with other refiners which limited its ability to adopt long-term marketing strategies. It had for some years, "with a good deal of frustration", been examining the feasibility of building a new refinery in western Canada in order to achieve long-term security of supply at satisfactory prices. By the agreements with Gulf, Texaco's existing and expected future requirements would be met out of Gulf's larger, more efficient Edmonton refinery. Texaco also obtained long-term lifting rights in B.C. and additional throughput volume for its new Calgary terminal.

(b) *Eastern Canada*. The recent closure of Texaco's Montreal refinery had meant that its product requirements in Quebec had to be supplied by transporting product from its Nanticoke and Dartmouth refineries. Not only did this involve transportation cost, but the Quebec government apparently gave preference in its purchases to product manufactured in Quebec. By arranging for its Quebec requirements to come from Gulf's Montreal refinery, Texaco eliminated the product transportation and related terminal costs, and also improved its ability to compete for sales to Quebec government agencies. The volumes that would thereby have been lost to its Nanticoke and Dartmouth refineries were picked up by a new entitlement to supply Gulf out of those refineries.

From Gulf's point of view the principal achievements of the new comprehensive arrangement were:

(a) *Western Canada*. Gulf's relatively new and large Edmonton refinery had recently lost Turbo as a customer and had lost some Shell business when

Shell built Scotford. The new Texaco contracts replaced this demand and utilized the extra capacity that had resulted in Gulf's Edmonton refinery. Use of Texaco's Calgary terminal enabled Gulf to close down its own aging terminal facilities in conjunction with closure of its asphalt plant there.

(b) *Eastern Canada*. Gulf had found that to a significant extent it could integrate the operations of its Clarkson and Montreal refineries by transporting a partly processed "energy stream" from Clarkson to Montreal by the Interprovincial pipeline. By, in effect, transferring its Toronto area Ontario marketing demand to Montreal it achieved very substantial cost savings by closing down the final processing stage for gasoline at Clarkson and by attaining virtually full utilization of its Montreal refinery.

The Director's view, as indicated above, was that the arrangement involved more cooperation and coordination between competitors than was desirable, and also that it was for too long a minimum term. Although the term covers many years, and there might be short-term negative effects in the form of higher prices,[6] the Commission is of the view that there was a competitive need for Gulf and Texaco (and for the industry, taking into account international trade) to reduce costs in light of the substantial decline in demand for refined product that had taken place since 1980.

Mounting financial pressures had driven each of Texaco and Gulf to consider a number of far-reaching options for cost reduction, and each had had various preliminary discussions with other competitors that for one reason or another did not lead to a "fit" in terms of price, scope, duration, volumes or whatever. The specific negotiations that led ultimately to Gulf's and Texaco's November 1983 arrangement were initiated by Gulf in February 1983 solely in relation to its Edmonton facility. Texaco broadened the subject of negotiations to include the possibility of a processing exchange between Texaco's Nanticoke refinery and Gulf's Montreal refinery. The negotiations, trade-offs and balancing eventually culminated in the series of seven agreements referred to above. Additional matters on which agreement could not be reached were also discussed.

Commission counsel and counsel for the Director examined all relevant files of both Texaco and Gulf relating to this matter and arranged for the production in evidence of any material that in the view of either of them had a bearing on the issues before the Commission. Testimony was heard from senior executives of both Gulf and Texaco both on the public record and *in camera*. The Commission is satisfied that Gulf and Texaco negotiated their arrangement at arm's length, with each one carefully protecting itself against the other, in order to improve both of their competitive positions as against the rest of the industry. None of the agreements restricts in any way the disposition of product by either company to reseller customers, nor does any exchange, purchase or processing arrangement apply to the total requirements of the recipient or limit the recipient in any way from seeking additional supply from other suppliers, although certain preferential rights of supply for additional requirements are given.

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[6] The Commission raises this as a question, not as a conclusion, since specific evidence and argument on this point would have carried the inquiry well past the reasonable point of a general inquiry under section 47.

The Commission is also satisfied that no information was exchanged between the parties beyond what was strictly necessary for the recipient in the case of each particular negotiated supply arrangement to indicate to the supplying party the approximate magnitude of its anticipated requirements under and for the life of the particular contract. For example, in the course of its negotiations for supply in Western Canada Texaco gave to Gulf its general 10 year demand forecast, but this was given in global figures except as required for the negotiation of specific lifting rights. This in no sense amounts to any market sharing proposal on any basis at all.

At the commencement of the negotiations Gulf and Texaco entered into a formal detailed agreement regarding the strict confidentiality of information that would have to be exchanged during the negotiations. The information was only to be communicated within the other company on a need-to-know basis, and was to be used solely for the purpose of the study and negotiations. All copies of all documentation were to be returned on request. There is nothing to suggest that this agreement regarding the exchange of information did not represent the true spirit and way in which the matter was actually handled.

The long term and interdependent nature of the agreements raises another question, namely, whether such arrangements give one refiner unreasonable power over decisions by the other to sell refineries or terminals that are required for performance under the arrangements. The power could arise from contractual restrictions upon the assignability of one's position under the contract without the consent of the other party.

When Petro-Canada purchased Gulf's downstream assets west of Quebec in 1985, the only part of the deal pertaining to areas east of Ontario related to Gulf's Montreal refinery. Petro-Canada acquired Gulf's Clarkson refinery near Toronto and redirected, to its own Montreal refinery, the "energy stream" that had been flowing from Clarkson to Gulf's Montreal refinery for final processing into gasoline. Also, and in addition to taking over Gulf's supply arrangements with Texaco west of Quebec, Petro-Canada took an assignment of Gulf's obligation to process for Texaco in Montreal, which was the other half of what the parties called the "reciprocal processing" portion of the arrangement whereby Texaco also processed for Gulf (Petro-Canada) at Nanticoke. This assignment meant the transfer from Gulf's Montreal refinery, to Petro-Canada's, of refining volume of approximately 34,000 b/d, which was about 45 per cent of the rated capacity of the Gulf refinery.

According to Mr. West of Petro-Canada, it was Gulf who requested that Petro-Canada take over the contract to process for Texaco in Montreal, and Petro-Canada did not seek it. He did not know what role, if any, Texaco might have played by way of insisting that the contracts west of Quebec not be assigned unless the Montreal one was also assigned. In any event it was clear to Mr. West, and to most other observers, that transferring the Texaco contract from the Gulf refinery to Petro-Canada's refinery would lead to the closure of Gulf's Montreal refinery. (Gulf's own retail supply requirements in Quebec were subsequently transferred to Ultramar's St-Romuald refinery as of early 1986 with the sale of Gulf's eastern Canadian marketing assets to Ultramar Canada.)

Gulf's Montreal refinery, which operated in conjunction with two petrochemical plants, was not obsolete. Although over 50 years old, it had in fact benefited recently from substantial investment. It was, however, the smallest refinery in Quebec with a rated capacity of 75,000 b/d as compared to Petro-Canada's refinery in Montreal (90,000 b/d), Shell's in Montreal (120,000 b/d) and Ultramar's in St-Romuald (100,000 b/d). It was the fourth Montreal refinery to close in the last three years, the others being those of Imperial Oil, Texaco and BP.

Issues outside of competition policy, such as regional development, are not within the mandate of this Commission. The Commission does not in any event have the information necessary to address these questions. But the process by which excess refining capacity in a region is eliminated, usually leading to more stable product prices, is a competition policy question that is relevant in this inquiry.

In this particular instance closure of Gulf's Montreal refinery was, in effect, approved by the Government of Canada by its approval of Petro-Canada's purchase of Gulf assets that virtually assured closure of the refinery, although a similar course of events might have taken place even without the assignment being part of Petro-Canada's purchase of Gulf's assets west of Quebec. Certainly the efficiency of the Petro-Canada and

Ultramar refineries in Quebec have improved as a result, but a diminution of competitive pressures may also be expected to lead to higher product prices, thereby enhancing profit levels for all marketers of gasoline in the region. Petro-Canada and Ultramar may reasonably expect to benefit both from lower unit costs and from higher unit revenues. (Surplus capacity, by contrast, is frequently accompanied by the double penalty of higher unit costs and lower unit revenues.)

The Gulf/Texaco supply arrangement was a unique response to unique sets of problems faced by the parties. The reciprocal nature of the Nanticoke and Montreal processing agreements was reasonable, and only led to closure of Gulf's Montreal refinery because of the splitting up of Gulf's Eastern Canada downstream organization.

In the Commission's view, examination of inter-refiner supply arrangements such as the Gulf/Texaco deal, is best done on the same basis as any other agreement between competitors or joint venturers. To seek to limit the permissible duration of such agreements or to prohibit contractual interdependence in some *a priori* manner would be arbitrary and would deny the wide variation in circumstances that can arise. The only general guidelines that appear appropriate are that there should be no representations or commitments preventing or limiting the right of any party to add to supplies in any way, but the evidence in this Inquiry does not disclose the existence of any such representations or commitments. Secondly, given the relatively tight oligopoly in the downstream sector, any such inter-refiner supply arrangements should not involve more than two parties, but again this has not been the Canadian experience. It is, however, a matter that deserves continuing attention in such a highly concentrated industry.

ii) Supply to Unintegrated Resellers

The Director submitted in his final argument that one result of what he called "reciprocal exchange agreements" was that "very little product remains outside of the vertical chain or exchange system and thus very little was available for non-integrated companies". When asked to identify the supporting evidence for this assertion the Director relied on what he called "the simple arithmetic of the system" and evidence given by Turbo officials that as Turbo's marketing organization grew in size it came to feel that in order to assure adequate continuous supply it should integrate backwards into refining.

The Director's submission appears to assume, first, that refinery capacity is fully utilized and, second, that integrated recipients of exchange volumes make no sales to unintegrated resellers. As he put it in argument: "By definition the larger the proportion of industry output which is committed [to a refiner's own stations and to other refiners on exchange], the less is available to the independent marketer".

The majors' response to this allegation was, essentially, that in selling gasoline to independents or in distributing it in any way their marketing department pays no attention to the source of the gasoline. Refiners view exchanges simply as a means of relocating their own product from one place to another.

There was no evidence that exchange of gasoline has ever been conditional upon a restriction on its resale. Nor was there any evidence of a general shortage of product being available from refiners to independents.

In order to determine whether those receiving product in exchange agreements acted as a general suppliers, or contracted for volumes just adequate for their own marketing needs, the Commission sought information from refiners regarding volume of sales to independent marketers out of product received in exchange agreements. In the Commission's view the greater the extent to which exchanged product was sold to independent marketers, and in commercial and industrial markets, the more pro-competitive exchange agreements could be considered to be. With receiving partners in exchange agreements acting as general suppliers and not just as marketers, exchange agreements would, in effect, add to the number of refiners in each region (although not, of course, to total refining supply). Unfortunately, the data did not allow any conclusions to be drawn. Some of the difficulty was that exchange was only one source of supply in Ontario and Quebec centers.

The Commission considers that the Director's submissions on this point are not substantiated. It is true that some unintegrated wholesalers and retailers have at times been concerned about adequate supply, adequate supply alternatives, and about supply terms that permitted them to compete with their vertically integrated supplier/competitors. It is true, too, that Turbo officials testified that a desire for increased security of supply was a factor in Turbo's decision to integrate backwards into refining. But problems of this nature are not chronic or general and ought not to be attributed to exchange agreements or other forms of inter-refiner supply. Apart from very occasional circumstances of very short duration Canadian refineries have not utilized their full production capacity (see Table 5), nor has more extensive use of inter-refiner supply agreements diminished the market shares of independents. Although Turbo made the decision it did, other large marketing organizations have achieved satisfactory security of supply through long term supply contracts, and have decided not to enter into refining. Other examples of supply concerns either are problems of equitable access during short term general shortages or resulted from policies of certain refiners, of which Irving appears to be the only current example, of not supplying independents.

To say that reciprocal supply agreements do not cause supply problems is not to say that they do not help reduce security of supply concerns for the parties to the agreements. Indeed, the refiners implicitly acknowledged the validity of supply concerns voiced by unintegrated marketers by arguing that one advantage of reciprocal agreements was to improve the security of supply to their own marketing outlets in areas where they did not have their own refineries. In other words, reciprocity added desired security to what would otherwise be an ordinary supply or processing agreement.

The better public policy response to the supply concerns of unintegrated marketers would appear to lie not in interfering with forms of inter-refiner supply, but instead in defining a more rigorous and meaningful duty to supply. Refiners enjoy a market power in supply matters that is unavoidable if Canada is to obtain the benefits of economies of scale in refining. This power is enlarged by the vertical integration into marketing that refiners say is necessary to reduce the investment risk of a refinery, and certainly refiners are strong participants in retail markets. But a responsibility comes with this power over supply, to seek to ensure that competition in product markets is not impaired by it. In Chapter XX the Commission addresses the question of defining a more meaningful duty to supply.

iii) Stability of Market Shares

The Director argued that "the requirement that exchanges must balance in volume terms necessarily entrenches existing market shares". In addition, he argued that recipients of exchange volumes were frequently restricted to their "normal growth" and that:

> Reciprocal exchange was used to monitor the deployment of product at any given point in time. Specifically, exchange agreements were designed to ensure that exchange partners did not compete too robustly in markets where they had no refinery. Restraints were also included in the agreements to deter the leakage of product into the reseller market.

The evidence relied upon by the Director in support of these allegations consisted almost entirely of a reciprocal asphalt processing arrangement between Gulf and Husky in Saskatchewan in the late 1960s, that was renewed to continue into the 1970s, involving Gulf refineries in Moose Jaw and Saskatoon and Husky refineries in Moose Jaw and Lloydminster. The evidence before the Commission as to what was actually agreed between the parties in this instance was not entirely clear and includes evidence of an allocation program by the Saskatchewan government among asphalt producers in the province. In any event if, as the Director urged, the agreement operated as a *de facto* market sharing agreement and as an agreement to restrict production capacity it was, first, not typical of exchange arrangements and, second, an arrangement with respect to which the Director should have taken other steps under other sections of the Combines Investigation Act.

Even if reciprocal inter-refiner supply arrangements appear on occasion to amount to a form of geographical specialization, that by no means necessarily implies an arrangement to share markets or to stabilize market shares.

iv) Efficiency

The Director's final criticism of inter-refiner supply agreements was, as he put it, that "reciprocal exchange agreements preserve inefficient refiners and lead to higher cost sourcing", both of which in the Director's view result in misallocation of resources regarding production and investment. In more specific terms the Director argued that preferences for reciprocal supply relationships reduce the number of potential suppliers by tending to limit supply to situations of coincident or matching demand and supply between the two parties. (In effect, he therefore submitted that reciprocity reduces the availability of product to integrated as well as unintegrated resellers.) In addition to his concern that the lowest cost supplier might not therefore necessarily get the business he was concerned that high cost product might go to low cost markets, and that reciprocity increased transactions costs of supply by complicating the search for suppliers and by distorting the volumes that would otherwise be sought or supplied by one or both of the parties. By way of specific example of these concerns, the Director submitted that the Consumers Co-operative refinery in Regina was insulated from market forces by reciprocal supply agreements, and that most of its markets could be supplied at lower cost from Edmonton refineries.

The Commission has examined the evidence on these matters, including the position of the Regina refinery, and can find no support for the Director's concern.

v) Entry by Regional Refiners

In the mid 1950s Pacific Petroleums decided to build a refinery at Taylor, about 45 miles from Fort St. John in northeastern British Columbia. Natural gas fields were being exploited there and, in order to prepare the gas for the Westcoast Transmission line, condensate and other natural gas liquids had to be removed. These liquids were suitable as refinery feedstock, and alternatively had to be flared off or trucked to such limited markets as could be found.

The Taylor refinery first began producing gasoline in 1958. By the time initial building plans were completed in 1961 it produced distillate and other products as well. The refinery had the capacity to produce approximately half the product requirements of the market immediately adjacent to Taylor, and to do so Pacific anticipated displacing some of the pre-existing supply which was being transported to the area from refineries in Edmonton (350 miles away), Kamloops and Vancouver. Pacific very soon found, however, that the existing suppliers would not benignly cede the market to the new competitor.

Following attempts to supply its competitors in the Taylor area, Pacific quickly realized that the competing refineries would only take product from Pacific in Taylor to the extent that Pacific would take refinery output from them elsewhere. Accordingly, Pacific began immediately to develop retailing capacity in the Edmonton, Kamloops and Vancouver areas and entered exchange agreements (initially with Royalite in Kamloops, Texaco in Edmonton, Imperial in Calgary and Chevron in Vancouver), and in that manner supported its Taylor refinery. Its marketing endeavours and relations with other refiners continued to develop on that basis, and several expansions were made to the Taylor refinery, prior to Pacific being purchased by Petro-Canada in 1979.

The evidence is not clear as to the comparative laid-down product costs of the various competitors in the immediate Taylor market. Pacific's competitors had transportation costs but they also enjoyed greater production economies of scale from their larger refineries. And feedstock costs were different; Pacific's feedstock costs, pursuant to its contract with Westcoast Transmission, apparently exceeded the cost of crude oil in Edmonton at the time.

In any event, it is clear that Pacific's investment for entry into the refining sector was greater than it had anticipated. As a practical matter it could not enter refining without also entering marketing. This meant that it had either to acquire existing retail outlets from others or to build new outlets regardless of whether or not additional marketing capacity was warranted in the areas where it had to establish a presence in order to buy from the refiners who had historically supplied the Taylor market. By cornering some of the retail demand in these other markets Pacific would reduce the market shares of other suppliers in those markets. Logically, however, it may be assumed that since overall refinery capacity increased without a comparable increase in demand, at least within the same time frame and until normal market growth caught up, overall the other refiners supplied less than they had supplied prior to Pacific's entry. To the extent that Pacific might have built new outlets and added to the industry's marketing capacity, it was done for reasons having nothing to do with any demand for new marketing capacity and, unless it fortuitously coincided with such a demand, resulted in at least a short term misallocation of resources. It resulted from extensive vertical integration in the industry and the power of the vertically integrated enterprises to protect themselves in a manner that also raised the cost of entry.

The Commission does not, however, believe that there is a remedy for such a possible misallocation of resources that would not be worse than the problem. If market pressures can be maintained at both the refinery and marketing levels, then the most inefficient capacity in a condition of serious and persisting excess capacity should be weeded out within a reasonable time.

vi) Other Aspects

Although the Commission is of the view that inter-refiner supply agreements, reciprocal or otherwise, can perform and have performed a useful function in facilitating industry adjustment, it is also possible that in specific cases they could have long term effects on the operation of markets that are on balance adverse and should be prevented. The magnitude and risk of refinery investment is increasing and there is a natural tendency, readily acknowledged by industry witnesses, towards a "joint venture" approach to higher risk investments. For reasons reviewed in this chapter there are not very many potential refiners in Canada.

In the Commission's view there is a need for a process by which the good and bad effects of particular major long term supply arrangements between or among refiners can be assessed and weighed against each other, as is envisaged under Bill C-91 for mergers and specialization agreements. For example, a long term supply arrangement that the parties obviously feel is in their own respective interests may also be in the public interest, or at least not be likely to prejudice it substantially. Alternatively, if it reduced supply or the number of suppliers to an extent that the public interest was likely to be prejudiced substantially, then there should be a means of preventing it.

There are, also, collateral terms in some of the inter-refiner supply agreements in evidence that are not necessary to the purpose of the agreements, that may have exclusionary effects in particular markets, and that should be subject to being reviewed under the Combines Investigation Act. Examples of such provisions are the following:

1. Exclusive dealing provisions or preferential rights or options regarding additional supply whereby a supplier of refining or terminal capacity obtains or acquires a right to receive the total business of the customer.
2. Preferential rights or options on the part of the customer with respect to surplus processing capacity in a refinery.
3. Preferential treatment of a large volume customer, pursuant to contract, in times of supply shortage.
4. Lengthy duration of certain agreements for large volumes extending beyond the reasonable need. For example, although one can understand long term supply contracts being entered into in conjunction with a refinery closure, it is difficult to justify a contract duration that exceeds the 8 or 10 year planning horizon for even a large refinery.

Each of these types of contract terms could have substantial foreclosure effects in particular cases, and a review process should be available to prevent unreasonable exclusionary effects.

The first requirement for an institutional capacity to safeguard the public interest is to have the information necessary for the assessment. Second, there must be a statutory power to remedy undesirable situations.

So far as timely availability of information about inter-refiner supply agreements is concerned it would be difficult, if not impossible, for the Director to know about particular agreements unless he were expressly notified of them. In the Commission's view it would therefore be desirable for the Director to be notified of all inter-refiner product supply agreements longer than five years in duration. The Director should be notified of all such agreements currently in force with longer than five years to run, and of such future agreements at or about the time they are entered into.

As for a statutory process by which inter-refiner supply agreements might be assessed and, if necessary, prohibited in whole or in part, the issues and problems are likely to be of the sort that cannot be adequately addressed either under the existing Act or under any provisions currently proposed in Bill C-91. In order to provide the public with a capacity to deal with potential problems that could arise in this connection or, indeed, in other contexts in other industries as well, the Commission recommends that consideration be given to adding a provision (perhaps in conjunction with new sections 50 and 51 that are proposed in Bill C-91) whereby it would not be necessary to establish as a pre-condition of remedial jurisdiction that the act or conduct in question was part of a "practice" or that it had any anti-competitive intent or object. The Commission is cognizant of the need to avoid interference under such a provision where the basis for interfering cannot be clearly demonstrated as justified by the market position of the participants and the effects on competition, but such a safeguard could be established in the legislation.

5. Conclusions

1. An examination of general indicators of competition in the refining sector over the last 35 years, taking account of the magnitude of investment and risk involved, suggests that the sector as a whole has been reasonably competitive. Concentration has been understandably high but changes in the ordinal ranking of firms on a regional basis, due in large part to new entry, suggests the operation of dynamic market forces. The actual record of entry and exit over this period confirms the conclusion. But recent increases in concentration and the substantial decline after 1980 in demand, which makes entry difficult, suggests caution for the future. The refining sector in Canada has benefitted from substantial ongoing new investment and the closures of recent years are part of a normal industry adjustment process in a changing economic environment. The closures do not appear to be inconsistent with the operation of healthy market forces. The ongoing rationalization process that has occurred over the last 35 years, as old refineries have closed and new capacity has been added, has increased the average size of refineries and has lowered the unit costs of production. Constraints on refinery size result from Canadian geography and the relatively small domestic market, and limit the economies that can be achieved by building even larger refineries.
2. Although there is no direct way in which the Commission can assess the readiness with which the refining sector has utilized new technology on an ongoing basis to achieve economies in production, there are several indications that no significant inhibitions or restraints exist in this respect. The refining sector appears to have continued to benefit on an ongoing basis from continual substantial investment in sophisticated conversion facilities and in new state-of-the-art refineries.
3. Inter-refiner supply agreements, even where they involve reciprocity and are long-term, facilitate the process of structural adjustment in the refining sector in order that it may respond to new pressures and take advantage of new opportunities. They can reduce the risk and cost of both adding to and reducing production capacity or, in other words, they can facilitate both entry and exit.

4. Although a preference for reciprocal deals may on occasion add to the cost of entry by regional refiners, and may make vertical integration more pervasive, the historical record of entry suggests that these barriers were not of a sufficient magnitude to justify remedies curtailing the agreements. Part of the added cost of entry is offset by improved efficiencies for the other parties to such agreements. These conclusions, however, are considerably less certain in an environment of little or no growth.

5. The detailed evidence on particular inter-refiner supply agreements clearly indicates that typically each refiner enters into such arrangements solely with a view to preserving and improving its own individual competitive position as against the rest of the industry, even though this also presumably involves an improvement of the competitive position of the other party to the agreement. It might also, however, produce benefits to firms who are not party to the particular agreement by facilitating a reduction of capacity such as might occur with a merger.

6. The nature and extent of inter-refiner supply agreements, including the extensive degree of reciprocity and the long-term nature of some of the agreements, do not give rise to competition problems that require general prohibitions or advance approvals such as were recommended by the Director. It is not a characteristic or effect of such agreements to stabilize market shares or to deprive unintegrated marketers of supply. It is, however, important to distinguish between essential aspects of the agreement and collateral conditions that might exist in specific agreements. Should any specific agreement, whether involving refiners or anyone else, restrict in any way the distribution of the product being supplied, or amount to market sharing, or limit in any way the supply or terms of supply to others, or involve a commitment to limit supply or involve any other type of exclusionary commitment, then the rules and procedures under the Combines Investigation Act that apply equally to all industries should provide sufficient remedy. In this regard, however, the Commission also makes recommendations regarding the scope of a supplier's duty to supply.

7. It would be in the public interest to have a public review process by means of which any act or agreement by any person that would substantially lessen competition, could be prohibited in relevant respect even where it was neither part of a practice nor done or entered into with any anti-competitive intent or object. This whole matter is developed further in our chapter regarding conclusions and recommendations.

8. The Director should be notified of inter-refiner product supply agreements longer than five years in duration, including such agreements currently in force with longer than five years left to run.

XI

Trade in Petroleum Products: The Import Option

1. Introduction

International trade in petroleum products, particularly on the import side, is of considerable importance because the extent to which domestic markets are integrated with foreign markets has a critical bearing on market power. Several questions arise in considering the relationship of the domestic downstream industry with foreign markets. Are there any governmental barriers to trade which could be removed? Are there non-governmental barriers to trade that can reasonably be reduced? Is the domestic industry sufficiently open to foreign competition to ensure continuing competitive pressure so that further remedies affecting conduct or structure in the industry are unnecessary, and if not, can it be made more open? Only the first question can be fully answered in this chapter. The others will be addressed here only in part, since they relate to the structure of the domestic industry and are discussed in other chapters.

Events over the past few years have greatly increased the importance of the import option as a check on the market power of domestic refiners. Declining sales of petroleum products from 1979 to 1984 has resulted in a number of refinery closures which, along with acquisitions in the industry, have led to increased concentration in the refining sector and higher rates of capacity utilization. Such changes, taken by themselves, tend to reduce domestic competitive pressures. Although offsetting economies or benefits may make particular closures and acquisitions in the public interest, they do increase the importance of the remaining ways to promote competition.

Apart from refiners, the principal importers of gasoline and light heating oil historically have been terminal operators. These firms, who are so important to the efficacy of the import option, are described in the second part of this chapter following a review of government trade restrictions. Knowledge of the structural characteristics of the terminalling business aids in one's understanding of the conditions under which the import option is likely to function and whether or not policy initiatives outside of the trade area are necessary.

2. The Effect of Government Restrictions on Product Imports and Exports

As shown in Table 1, during the 1960s product imports were an important source of domestic supply. Eastern Canada and, in the case of heavy fuel oil, the West Coast, accounted for almost all of the imports. Product imports were high at this time due to favorable international prices and to inadequate domestic capacity to produce fuel oil. Both of these factors were reversed in the early 1970s. The building of new refineries and the expansion of existing ones resulted in increased domestic supplies and a

Table XI-1

Product Imports — 1960 to 1985

	Motor Gasoline	Light Fuels*	Heavy Fuel Oil	Total All Products
	(Thousands of cubic metres)			
1960	168	2,213	2,179	5,279
1961	117	1,982	1,627	4,718
1962	95	1,736	2,137	4,778
1963	314	1,696	2,389	5,194
1964	328	2,068	3,592	6,961
1965	311	2,994	4,910	9,374
1966	408	2,686	5,066	9,485
1967	673	2,990	5,604	10,844
1968	715	3,984	5,475	11,832
1969	755	3,324	5,825	11,880
1970	857	3,120	5,852	11,419
1971	651	2,419	4,749	8,861
1972	471	2,374	4,098	8,247
1973	21	886	3,747	6,081
1974	3	435	2,408	4,150
1975	5	258	1,168	2,327
1976	7	164	1,320	2,093
1977	—	214	2,069	3,322
1978	2	84	1,864	3,001
1979	79	164	704	1,238
1980	176	99	1,111	2,521
1981	119	239	1,198	2,512
1982	27	39	1,616	2,628
1983	491	712	975	3,158
1984	516	1,856	1,013	5,286
1985	925	1,125	1,063	5,000

* Includes kerosene, stove oil, diesel, and Nos. 2 and 3 fuel oils.

Source: Statistics Canada, *Refined Petroleum Products*, January edition, (Catalogue No. 45-004).

capacity to export. After 1972, as international crude oil markets moved from a position of relative glut to one of relative tight supply, caused in large part by anxiety over supply, international product markets moved in concert. Both motor gasoline and light fuel oil imports into Canada became a trickle after 1972.

During the 1960s product exports were negligible, being on average, about eight per cent of the level of imports. Imports declined in the early 1970s and exports rapidly increased until the two were approximately in balance in 1973. Taking the period 1974-84 as a whole, exports were about twice the level of imports and exceeded imports in every year. During this period, exports were, on average, about 6.5 per cent of apparent Canadian crude oil consumption, a level that would be of more than marginal significance in the fortunes of the industry.

Tariff and non-tariff barriers were of varying importance throughout the years covered in Table 1. A Canadian tariff of 1¢ per gallon on gasoline applied until 1974. The tariff may have allowed slightly higher domestic prices but it was not large enough to restrict imports significantly. Other government programs that affected imports during 1960-84 included voluntary restrictions on the westward movement of products across the NOP line until 1970 when mandatory quotas on such movements of gasoline were introduced. The voluntary restrictions appear, however, to have had little effect on independent resellers. There probably was increased movement of product by independent resellers westward across the NOP line in order to take advantage of higher prices in Ontario. The mandatory quotas, however, effectively restricted the westward movement of both domestic and imported gasoline across the NOP line. The incentive for such movements soon diminished and disappeared as international crude oil and product prices increased.

Another federal government restriction on product imports took the form of negative differentials on import compensation paid on product imports as compared to crude oil imports. A differential was introduced in the second quarter of 1974 and was continued in a different form when the method of determining the rate of compensation was established in June 1975. The first differential appears to have had the effect of reducing the rate of compensation paid on the product component of the import compensation to about three quarters of that paid on crude oil imports excluding the transportation component.[1] The second differential, which was the focus of evidence in the inquiry, took the form of a flat rate difference in compensation of $1.50 a barrel. According to officials of EMR:

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[1] Compensation was designed to cover increases in both costs of product (or crude) and costs of transportation, each of which was calculated separately.

> The differential persisted universally until February 1978, and from that time it was reduced or eliminated for specific grades of product until it was totally eliminated in July, 1979.

A statement filed with the Commission by EMR explained that:

> the differential was intended to provide a measure of protection to the Canadian refining industry during a period when oil product prices were depressed relative to crude oil prices.

In expanding on the reasons why the differential was introduced, Mr. Priddle, Assistant Deputy Minister for Petroleum, Department of Energy, Mines and Resources and Vice-Chairman of the Petroleum Compensation Board at the time of testimony, stated that it could be viewed as consistent with an earlier policy of protecting the refining industry, and further, that the addition of refining capacity in Canada in the early 1970s meant that imports were no longer needed to meet Canadian demand requirements. Assuring security of product supply was also cited as a reason for protecting the refining industry. The principal concern of the Government, according to Imperial Oil, was the protection of refineries in Eastern Canada whose exports to the U.S. had been significantly reduced.

The differential did, in fact, create a very high level of protection that greatly reduced the possibility of product imports by terminal operators.[2] Refinery value added provides a measure of refinery costs that includes the return on invested capital at the time and excludes the cost of crude oil. Value added per barrel in 1975 was $1.23, an amount well below the import differential of $1.50, which, on the basis of this comparison, can best be described as a prohibitive tariff.

Whatever the situation when the differential was first introduced, the evidence of officials from EMR is that it is far from clear that there would have been significant imports even without the differential. When asked about the practical effects of the differential, Mr. Priddle stated that they could only be established through a comparison of domestic and import wholesale prices during the period in question after taking into account various barriers to import such as price risk. In the words of Mr. Priddle:

> If the $1.50 had not been there, I am not quite sure that there would have been a large flow of imports or that the situation of the non-refiner/marketers would have been better than it was in practice.

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[2] Industrial users of heavy oil on the West Coast and refiners were in a different position. Availability of domestic supplies would have been a consideration for the former, but the latter could find it cheaper to round out their product slate by importing.

> I think that my view is that the compensation differential may at times have impaired the non-refiner/marketers' importing opportunity. At other times it did not. But it is very difficult to come to a landing on that question because there are factors other than straight price comparisons to be taken into account.

Mr. Pierre Sénécal, President of Caloil Inc. from 1963 to 1979 when the company ceased operations and its assets were sold, did not disagree with this general assessment. He testified however, that the differential had had a devastating effect on his company. He stated that the differential eliminated the possibility of import and made Caloil vulnerable to product shortages and to higher prices asked by Canadian refiners. Caloil had been owned since 1973 by Charter Oil, a U.S. company with a refinery in the Bahamas which marketed petroleum products in New England. Mr. Sénécal's evidence with regard to Caloil's alleged supply difficulties is discussed in a later section. Here the important point is that in Mr. Sénécal's view, the $1.50 differential was a major factor in the difficulties experienced by Caloil in negotiating supply prices which would allow profitable operations.

Efforts over 18 months, from the fall of 1975, by the Independent Terminal Operators Association to convince the Government to modify its policy with respect to the $1.50 differential were unsuccessful and were finally abandoned. The members of the Association consisted of Caloil Inc., Canadian Fuel Marketers, Elf Hydrocarbures du Québec, Metropolitan Petroleum, Murphy Oil and Natomas of Canada, Ltd.

When the differential was removed as of July 1979, it was replaced by the federal licensing of imports of heavy fuel oil by the NEB.

Government interventions are likely to have effects which continue after the interventions have ended. The long-term strategy of domestic buyers, and hence their relationship with refiners, is influenced by whether they believe that imports are a viable source of supply. The views of buyers are formed in part by their readings of the likely course of domestic and international prices, and by whether the rules on product imports are stable or are subject to change when product imports become a profitable alternative to domestic supply.

From April 1982 until the decontrol of crude oil prices in June 1985, the rules used to determine the level of import compensation had an inadvertent negative effect on product imports (and on re-exports). Until April 1982 the monthly standard of compensation was announced prior to the month to which the compensation applied. After that date and in order to align the standard of compensation to import prices for the month in question, the standard of compensation (determined by the prices of the various types of crude oil imported) for any month was announced at the end of the following month. Due to variations in the level of crude oil prices and in the types of crude oil imported, there were sometimes large swings in the levels of compensation which created additional risks for product importers.

Prior to August 1982 the interpretation of the rules on import compensation discouraged overland imports by truck from the U.S. The compensation program had been designed, apparently for administrative convenience, to compensate only ship transport. Accordingly, would-be importers would have been required to make an application for special compensation, with no guarantee that it would be granted. The system was changed to ensure import compensation on equal terms for product imports by truck around the time when available information on rack prices on both sides of the border indicated that imports were becoming profitable. In keeping with the rules on imports of crude oil and product by other modes of transport, transport costs to the Canadian border on truckload imports were also compensated. This partially overcame one of the important barriers to product imports — the cost of moving product to market.

American government programs have also had an important effect on the source, and perhaps on the volume, of Canadian product imports. For 25 years prior to the recent decontrolling of crude oil prices in the United States, the U.S. had not been an important source of product imports into Canada. During the first part of this period it had been a high-cost source of product because it limited the quantity of cheaper foreign crude oil that could be imported. After 1973, U.S. domestic crude oil prices were maintained below world levels and product exports were restricted in order not to subsidize foreign consumers.

Until very recently Canadian government programs, and the frequency of changes to them, have in one way or another affected decisions on product imports. Increased confidence in the stability and neutrality of the government environment with respect to product imports may reasonably be expected to make the import option a more effective influence on domestic supply relationships and competition in Canada. At the same time, it is important to recognize that the critical factor determining the level of product imports has been the turbulence in international crude oil and product markets and in domestic retail and wholesale markets.

The need to obtain regulatory approval for exports from the NEB prior to the Western Accord could have been an impediment to export sales, particularly for spot sales when the seller was required to respond quickly to changing market circumstances. The Commission understands that the NEB responded to this problem under the market conditions that existed, by instituting procedures which permitted advance clearance.

A variable tax on product exports which was intended to ensure that exports reflected prevailing international crude oil prices and not lower Canadian prices, also could affect the volume of exports. This tax was eliminated with the decontrol of crude oil prices in June 1985. Difficulties for exporters arose when the tax on exports was too high in relation to market conditions, thereby making Canadian exports non-competitive. Given that it would be too much to expect the tax to reflect market conditions perfectly accurately, there was an inevitable conflict between the goal of the tax — prevention of subsidized exports — and the interest in avoiding placing Canadian exporters at a disadvantage that they would not experience in a free market environment. The effect of the tax on exports depended on whether the concerns which led to the creation of the tax were given more weight by government officials than the goal of encouraging exports, or ensuring at least, that exporters were not at a disadvantage.

3. Product Importers

The principal product importers are refiners, terminal operators and large consumers of heavy fuel oil who import for their own use. Refiner imports, which are usually the largest, are accounted for by the multi-product characteristic of petroleum refining. Output of any product cannot be increased or decreased without affecting the output of other products. Depending on the supply/demand balance of the various product markets, importation of particular types of product as required, may be the economic course for a refiner. Exports allow a similar flexibility, permitting refiners to increase the output of certain products knowing that by-products may be exported at a better price than they could get by unloading the surplus on Canadian markets.

There was also a limited amount of importing by truck by independent marketers in the 1950s and in recent years. As explained above, the U.S. was not a significant source of product imports in the intervening years. The small volume of imports of gasoline by independent marketers since 1982, as shown in Table 2, was probably all in the form of truckload quantities from the U.S. There are, however, only a limited number of Canadian markets that are accessible to this source of wholesale supply because highway transportation of petroleum products is the most expensive mode of transport. The level of imports of gasoline by non-refiners in the first five months of 1985, until decontrol of crude oil prices put an end to the import compensation program, was somewhat higher than in the same period of the previous year. During this period, for the first time in the 1980s, there were some imports by non-refiners of gasoline into Quebec and of middle distillates into Ontario.

Table XI-2

Total Imports of Gasoline, Middle Distillates and Heavy Heating Oil from the U.S. and Other Sources, and Percentage of Imports by Non-Refiners, 1982 to 1984

	1982	1983	1984
	(Cubic metres, with percentages in parentheses)*		
Gasoline			
From U.S.	20,766.5 (25.1)	260,637.6 (5.3)	109,138.9 (34.6)
From Other	39,569.7 (0)	297,317.4 (0)	480,789.6 (0)
Total	60,336.2 (8.6)	557,955.0 (2.5)	589,928.5 (6.4)
Middle Distillates**			
From U.S.	0 (0)	229,648.7 (14.2)	992,385.9 (20.6)
From Other	111,432 (0)	391,853.7 (38.0)	1,363,138.2 (18.8)
Total	111,432 (0)	621,502.4 (29.2)	2,355,524.1 (19.6)
Heavy Heating Oil			
From U.S.	674,284.6 (84.2)	458,695.3 (82.0)	366,415.6 (79.4)
From Other	871,443.4 (94.6)	680,240.4 (63.7)	680,583.3 (74.5)
Total	1,545,728.0 (90.1)	1,138,935.7 (71.0)	1,046,998.9 (76.3)

* The percentages relate imports by non-refiners to total imports. The total volumes of imports in Table 2 do not exactly correspond to those in Table 1 since the data on which Table 2 is based were derived from the specific rules relating to the payment of import compensation.

** The percentage of middle distillate imports by independents is overstated due to the fact that Pittston Petroleum, acquired by Ultramar in May 1983, was classified as an independent in EMR's breakdown of importers.

Source: Information provided to the Commission by Energy, Mines and Resources Canada.

4. Terminal Operators

The number and level of activity of terminal operators has followed the large swings in product imports shown in Table 1. There were as many as seven non-refiner marine terminal operators active during the 1960s.[3] There is currently only one such marine terminal operator, Motoco Petroleum Inc. of Montreal, with sufficient downstream business to undertake imports of light fuel oil and gasoline. Universal Terminals Ltd. of Cornwall has sufficient light fuel oil sales and capacity to import this product. Large terminal capacity is held by a third firm without domestic refining capacity, Charter Oil, believed to use its terminal in Montreal primarily for transshipment of heavy fuel oil to the State of New York.

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[3] Canadian Fuel Marketers, Caloil Inc., Murphy Oil, Natomas of Canada, Ltd., Metropolitan Petroleum, Roy-L. Canadian Fuels, and Anglin Fuels. In addition, Ultramar was one of the largest importers as it established distribution networks in preparation for the opening of its refinery at St-Romuald in 1971.

Terminal operation requires access to large volumes of wholesale or retail business. This means that either these markets must be generally accessible (i.e., not vertically integrated or tied up by contracts) or the terminal operator must succeed in developing a secure volume of his own. Thus, where there already is a high degree of vertical integration, the pressures to be vertically integrated are similar to those on refiners. They are less pronounced on the terminal operator, however, because of the smaller scale required in terminal operations and because of the potential for export sales to markets in the North Eastern United States open to unintegrated marketers.

Economies of scale in terminal operations result from the fact that the cost of tanks and their maintenance do not rise as quickly as capacity increases. Also, there are probably relatively fixed costs of overseeing a terminal over a fairly wide range of capacity. However, no estimates of scale economies are in evidence.

Heavy fuel oil is stored in an insulated, heated tank. Gasoline tanks require a floating roof and are relatively expensive. Tanks for light fuel oil and diesel are the least expensive since they do not have such special requirements.[4] They can also be adapted to store other materials such as chemicals. According to Mr. W. Kaneb of Motoco Petroleum Inc., the replacement cost of a 142-million-litre mixed-storage facility would be approximately 9¢-10¢/l ($15 per barrel). There is, however, no evidence on the resale value of existing facilities, which one would expect to be depressed by the existence of considerable unused tankage capacity.

The key economic characteristic of terminal operation (like a self-serve gasoline outlet) is that for any given size of terminal, most costs, apart from cost of products, are fixed regardless of the level of sales. Financial carrying costs per unit, while not fixed, also quickly decline with increased rate of turnover and contribute to making average total costs highly sensitive to the rate of throughput.

As stressed by a number of witnesses, the benefits of the import option to terminal operators could be obtained without their actually importing any significant quantities. It was the ability to import that was important, since it could induce domestic refiners to offer more favorable prices than they otherwise might.

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[4] If middle distillate is dyed to make it distinguishable from diesel oil which bears a highway tax, it must be kept in separate tankage.

A minimum boat-load product cargo (according to EMR) contains about 16 million litres. Gasoline sales per independent outlet in Montreal are approximately two million litres per year. A terminal operator who imported four cargoes per year, which is probably the minimum possible in order to assure that the gasoline is suitable for each of the seasons, would require the total purchases of 32 stations.

Access to a significant volume of heating oil customers would also be required by potential importers. In 1982 Sipco, one of the largest independent suppliers of light fuel oil in Ontario, had sales of this product of approximately 90 million litres per year, which is the equivalent of somewhat more than five minimum-size cargoes.

A brief review of the firms who, until recently, had marine terminal facilities illustrates the importance of captive markets to their operations and describes how the current situation concerning ownership and availability of marine terminal capacity developed.

Murphy Oil. This firm was one of several who entered retailing in Quebec and Ontario in the 1950s to take advantage of the availability of inexpensive foreign crude oil. It had operated a chain of outlets under the name "Spur" until it sold its Ontario outlets to Turbo in 1980 and those in Quebec to Ultramar in 1983. It had previously sold its retail and wholesale heating oil distribution business. It entered into several processing agreements with domestic refiners, supplemented from time to time by product imports.

Murphy Oil's witnesses testified in April 1983 that imports were not a preferred supply option at that time because of

(a) the uncertainty caused by the potential for government interference with trade;

(b) unleaded gasoline quality problems related to requirements of the Canadian climate; and

(c) the insecurity of relying on spot market purchases for maintaining long-term supply commitments if world prices were only marginally and infrequently lower than domestic prices.

Canadian Fuel Marketers (CFM) — This company was formed through the merger of several heating oil distributors. Relying very heavily on imported supplies, it became a large marketer of fuel oil in the 1960s. It was acquired in 1969 by Royal Dutch Shell, who sold it in 1979 to Ultramar.

Natomas of Canada, Ltd. This company's business was recently acquired by Motoco Petroleum Inc., described below.

Natomas was a wholly-owned subsidiary of Natomas Company of California which is active in several stages of the petroleum industry. Natomas was established in Quebec in 1965. It purchased marketing outlets (Premium Oil in Ontario in 1965 and Independent Gas Stations or IGS in Quebec in 1966) to market the output of a new refinery its parent had established in Antigua.

Natomas built a large terminal in Quebec City in 1968 that was used to receive imports from Antigua and occasional spot cargoes arranged through New York brokers. It also purchased from several domestic refiners under short-term contracts. In 1972 Natomas found that it was less expensive to purchase domestic product and eventually it moved to long-term contracts with domestic refiners.

Mr. M. Chevalier, the President of Natomas of Canada, gave evidence in late 1983 that short-term or spot purchases from either domestic or foreign sources had become too risky since 1982 because of price wars. Both of Natomas's main suppliers, Shell and Imperial, provided it with margin support, the terms of which are discussed in Chapter XVI.

The instability of retail prices since 1982 has been an important inhibiting factor on product imports, even during periods when a comparison of posted domestic and foreign wholesale prices indicates that it might have been profitable to import product. Such comparisons do not make allowance for the risk to the importer of not knowing the retail price at which the product would ultimately be sold.

Natomas had also obtained a small terminal in Toronto with its acquisition of Premium Oil, but it did not use this storage facility because it was less costly to pick up its product at its supplying refiners' rack. It also obtained a large terminal in Oshawa when it acquired DX in 1979, a facility which received heating oil shipped from Sarnia during the summer. The location of the Oshawa terminal suggests that it could be used to import product from refineries and terminals on the Great Lakes should price differentials make it profitable to do so.

As of 1982 Natomas owned and operated 70 IGS outlets in Quebec and 33 DX outlets in Ontario. It also supplied about 56 independent outlets of which 26 marketed under the IGS or DX brands. Natomas also supplied heating fuel to independent marketers and retail distributors of heating fuel in the Oshawa area that were part of the acquired DX operations.

Motoco Petroleum Inc. The principal owner of Motoco Petroleum is Mr. Wilfred Kaneb. Prior to establishing Motoco in 1981 through the acquisition of Elf Hydrocarbures du Québec from the French company Société Nationale Elf Aquitaine, Mr. Kaneb had been active in petroleum products distribution for a number of years. He started as a fuel oil marketer and had owned Metropolitan Petroleum from 1964 to 1980, when he sold the business to Pittston Petroleum, U.S.A. (subsequently acquired by Ultramar in 1983). Metropolitan had dealt primarily in heavy fuel oil and to a lesser extent in light fuel oil. Until 1973 about one half of its sales were made into New York State. Several terminal operators who dealt extensively in fuel oils, such as C.F.M., also supplied this region.

Elf Hydrocarbures, which was set up in the mid-seventies, was one of the few terminal operators not established during the 1950s or 1960s. With the acquisition of Elf in 1981, Mr. Kaneb obtained a deep-water terminal in Montreal capable of accommodating ships too large for the Seaway (142-million-litre capacity). Motoco also has a small marine terminal in Halifax and truck terminals in St-Jean, Ottawa and Halifax. At the time of testimony Motoco supplied 24 gasoline outlets it had acquired from Elf, 40 to 50 independent retailers, and some 12,000 retail fuel oil customers (approximately 40-50 million litres of fuel oil per year).

Mr. Kaneb followed a policy of obtaining roughly 60 per cent of his supplies under contract and the remainder on the spot market. He did not renew a processing agreement Elf had had when it was purchased because he preferred to purchase product.

When importing large cargoes Metropolitain often arranged to sell part of the cargo to refiners or other terminal operators before the ship was unloaded so that as little as possible was placed in storage.

Mr. Kaneb has on occasion leased storage space, usually in increments of approximately 8 million litres in a storage tank of roughly 24-million-litre capacity. He stated, however, that he refused to allow smaller operators to lease capacity for the purpose of bringing in a shared cargo, because "we have a responsibility to the marketplace". If this attitude was shared by refiners, who are the principal holders of terminal capacity, the question of access to marine storage by would-be importers could become a matter of public concern.

Universal Terminals Ltd. — Universal Terminals of Cornwall, Ontario is owned by its President Mr. Thomas Kaneb, other Kaneb family interests, and by Ultramar which holds 50 per cent. Mr. Kaneb's father, who was a fuel oil dealer, acquired Shell's Cornwall terminal facilities in 1955 in conjunction with a "passive" investor. Later, the non-Kaneb interest was sold to Royal Dutch Shell, who in 1979 resold it to Ultramar. Mr. Kaneb said that he manages the business in complete independence from Ultramar, from whom he purchases very little product.

Universal has terminal capacity of 125 million litres, divided almost equally between light and heavy fuel oil. It also has gasoline storage capacity of approximately 250,000 litres, which is not much more than is found at a very large retail gasoline outlet. Universal's location gives it access to marine transportation of domestic and foreign product.

Universal's sales volume of roughly 215 million litres in 1982 consisted of 60 per cent heavy fuel oil, 30 per cent light fuel oil and 10 per cent gasoline. The heavy fuel oil was sold to large industrial customers. The light fuel oil was sold primarily to households in the Cornwall-Brockville area, with about 10-15 per cent of sales to other retail furnace oil dealers. It operated a gasoline outlet, sold to two independent gasoline outlets, and supplied its farm trade with gasoline, fuel oil and diesel. Universal acts as a wholesaler rather than a terminal operator in its sales of gasoline, picking it up at the refiner's terminal and delivering it directly to customers.

Universal purchased light and heavy fuel oil from a number of domestic suppliers. It also sometimes purchased fuel oil during summer months on a spot basis when refiners found themselves with inadequate storage capacity.

Universal has not imported light fuel oil, but Mr. Kaneb said that its ability to do so was an important consideration when negotiating with domestic refiners. It had, however, imported several cargoes of heavy fuel oil in 1980 and 1981, occasionally in conjunction with Motoco Petroleum in Montreal.

Prior to 1974 Universal exported heavy fuel oil to northern New York. It resumed sales to this area in the 1980s, subject to the difficulties discussed earlier.

Caloil Inc. — The founder of Caloil started in the petroleum industry as a heating oil distributor in the 1950s and then branched into gasoline distribution in the early 1960s. In 1963 Caloil leased a 40-million-litre terminal facility in Montreal. It acquired this facility in 1965 and expanded its capacity to over 200 million litres. Caloil developed a chain of service stations in Quebec and Eastern Ontario which totalled 130 outlets in 1976. About 45 per cent of its sales volume consisted of light and heavy fuel oil.

Caloil was also a large wholesaler of gasoline in Ontario, selling large quantities to Arrow Petroleum and to other independents in Southern Ontario until mandatory quotas on the westward movement of gasoline across the NOP line were introduced in 1970. Gasoline sales reached a peak of 568 million litres in the mid-sixties, of which approximately 150 million litres were sold in Ontario. Caloil vigorously opposed the efforts of the Government to make the NOP line effective.

Mr. Sénécal stated that he had difficulty in obtaining supplies from local refiners and their affiliates in the Caribbean in the early 1960s, leading him to seek supplies in Europe from unintegrated or independent refiners.[5] Until 1973 about one half of Caloil's supplies were imported either from Europe or from the Caribbean. Prices of imported product were generally a fraction-of-a-cent to several cents per gallon cheaper than locally available supplies. In 1974 Caloil's main supplier was the Newfoundland Refining Co. Ltd. at Come-By-Chance, Newfoundland. This refinery was closed in 1976.

5. Complaints by Terminal Operators

Mr. Sénécal stated that the introduction of the $1.50 per barrel import compensation differential on imported product made it "economically impossible" to import and that the refiners took advantage of this fact. He recounted an attempt to obtain supplies in September of 1976, after his Newfoundland supplier closed, when several refiners stated that they did not have any supplies and others quoted prices that Mr. Sénécal claimed were too high to allow any profit for Caloil. He also stated that quotes on public tenders by much smaller competitors indicated that they were receiving much more favorable prices from refiners than was Caloil. Mr. Sénécal's evidence with respect to Caloil's difficulties was not contradicted. However, no other terminal operators complained of discriminatory treatment by refiners.

6. The Import Option

The Commission has already stressed that domestic competition would benefit if the import option were kept as open as possible. It would also be valuable for importers, would-be importers, their customers and also refiners to have some assurance that the import option will be kept open in the future. This would facilitate long-run planning when entering into negotiations for supply and making investment decisions.

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[5] Subsequently Caloil was able to obtain product from affiliates of Canadian refiners in the Caribbean (i.e., Shell in Curacao).

The Commission recognizes, of course, that there are arguments and concerns in the area of trade that go beyond competition policy and which are best addressed in a wider policy perspective than is possible in a section 47 inquiry. There are, however, certain concerns that are particular to the petroleum industry.

The sharp decline in sales of petroleum products in the 1980s resulted in excess refinery capacity worldwide, aggravated by the recent growth of refining capacity in the Middle East. In spite of widescale refinery closures in Europe, Japan and North America, there is persisting excess capacity in the refining industry. Excess capacity in any region creates economic pressure for exports and political demands for protection against imports.

Protectionist pressures are particularly likely to arise in response to exports from crude oil producing countries, who might try to boost product (and indirectly crude oil) exports by "under-pricing" crude oil used for their refineries. While such a policy on the part of crude oil producers cannot be ruled out, it is important to recognize that if it were implemented it would become part of the dynamics of international crude oil and product pricing. Crude oil producers could not subsidize domestic refiners without being subjected to pressures for price reductions on their crude oil from other refiner customers, and therefore such subsidies are not likely to be part of a viable, long-term policy on their part. From a Canadian perspective, protection against subsidized imports can partly be obtained by ensuring that domestic refiners are purchasing their crude oil supplies at the most favorable available prices; but the line is a fine one. Also, although there are political and administrative difficulties in applying anti-dumping duties, they are another source of protection against possible abuses in the trade of petroleum products.

Given that security of supply of crude oil is one of Canada's national priorities, can product imports ever be allowed to fill more than marginal requirements and thus have only a limited impact on the competitive environment? Some petroleum companies have argued that there is little point in having security of crude oil supply if there is any significant reliance on imported product. This argument only holds for a time-frame too short to allow additions to existing refinery capacity. Over a longer period it may make good sense to ensure crude oil and other energy requirements even if there is some shortfall in refining capacity. Superficially, security of supply considerations might seem inconsistent with allowing imports to increase domestic competition — greater weight to one means less weight being given to the other. Security of supply is not, however, an absolute. Reasonable levels of security are not inconsistent with the import option having a meaningful effect on domestic competition.

Since protectionism entails costs, one must consider the contingencies that security of supply is meant to guard against. The main concern is with disruptions in international supply as a result of political events. Under these circumstances the disruption in supplies to any country would depend on whether it acted alone or shared its supplies with its partners. Assuming the latter course were adopted, the key consideration for Canada and its partners would be whether or not an excessive percentage of their combined supplies originated in politically sensitive areas.

From Canada's viewpoint security of supply could be jeopardized if product imports were to force a reduction of capacity below a critical level — i.e., one that would result in unacceptable hardships in the event of a supply disruption. The effects of such a reduction in capacity would not be felt without considerable advance warning, thus leaving time for the Government to take necessary steps.

The best means of ensuring security of supply in refined products have already been taken. Refinery closures have tended to concentrate production in newer and larger plants, and have reduced unit costs by increasing capacity utilization. These increases in production efficiency have been bought at some cost in reduced competition. For the full benefits of efficiency gains to be attained, however, governmental barriers to product imports should not be reintroduced.

7. Summary and Conclusions

1. Since the prices of crude oil were decontrolled on June 1, 1985, there are no governmental barriers to product imports. It will probably take some time, however, to determine the extent to which this will tie Canadian wholesale prices to those in foreign markets.

2. Average unit costs of terminal operation fall as the volume of throughput increases. Investment in a terminal is generally only worthwhile if the operator can count on a high level of throughput or price concessions from domestic refiners (due to the terminal owner's ability to import) on a large volume of purchases.

3. Large-scale importers of gasoline, and to a lesser extent, heating oil, require their own captive customer demand in order to minimize the risks of trying to sell into markets already greatly thinned by vertical integration or supply contracts binding potential buyers to domestic suppliers.

4. There has been a limited amount of importing of truck-load quantities of gasoline from the U.S. in recent years. The effect of this source of supply on wholesale prices in Southern Ontario, Quebec and British Columbia may be greater than is indicated by the volume of imports. Road transport is, however, costly for long distances and many of the U.S. terminals close to the Canadian border are themselves far from refineries or ocean terminals. This means that large-scale import of products is open only to terminal operators and, of course, refiners.

5. Unstable retail gasoline prices in recent years have made imports riskier than domestic supplies. Domestic wholesale prices have been responsive to the wide fluctuations in retail prices through support programs or otherwise, and thus most of the downside price risk has been absorbed by domestic refiners. This may account for the failure of resellers in recent years to import ship-load quantities during periods when the laid-down cost of imports has been lower than posted DTW domestic prices.

6. While import competition can be expected to work only imperfectly, it is nevertheless very desirable that it not be obstructed. Acquisitions and the closure of Canadian refineries in response to falling demand increase concentration and tend to reduce competition. At the same time, the industry's ability to withstand foreign competition has been strengthened through the concentration of production in larger and more modern refineries.

7. Terminal capacity is held by a few firms. The current law on refusal to supply would probably have only a very limited application in the event that other firms desired to rent some of this capacity.

8. As world petroleum prices fall, and are reportedly reflected more quickly in the United States than in Canada, the near term may provide a crucial period for testing the import option and, perhaps, the Government's will to keep it open.

XII

Vertical Integration and Other Vertical Arrangements

1. Vertical Integration and Economic Concentration

The principal public policy questions to be addressed in this section 47 inquiry arise initially from the existence of a concentrated refining industry. It is not concentration *per se* which creates the questions, however. They arise as a result of commercial relations and structures that exist *in combination with high concentration.* Concentration is not under attack. Indeed, as seen in the chapter on refining, even somewhat higher concentration levels might be justified by the economies of scale. High concentration is, however, part of a public policy problem (more so today in this industry than when the inquiry began) insofar as conduct and commercial relationships considered unexceptional in an industry with low concentration, raise questions when there are few firms.

The important questions and criticisms raised in the inquiry regarding the actions of petroleum companies virtually all relate to vertical integration, as broadly defined below, in combination with high concentration. A critical element is the nature and extent of vertical relationships that are entered into with competitors, thereby increasing horizontal integration or concentration of control over key market variables such as price. This element is present whenever refiners enter into supply relationships that give them partial or complete control over the prices charged by their customer/competitors. Whenever this occurs the essential question that is raised is whether or not such relationships entered into by individual refiners give refiners, as a group, greater control over retail prices — i.e., does it increase their market power?

Narrowly defined, vertical integration means the replacement of market transactions by activities that are internal to firms. In the words of Professor Adelman, vertical integration occurs whenever a firm "transmits from one of its departments to another a good or service which could, without major adaptation, be sold in the market". In backward vertical integration, the manufacturer produces some or all of his raw materials, and in forward vertical integration, he sells directly to consumers rather than, or in addition to, selling to wholesalers or retailers. "Vertical integration", as used in this chapter, encompasses arrangements which produce the same or similar effects as narrowly defined vertical integration — i.e., where the activities in question are all internal to the firm. A broad functional approach to vertical integration is desirable because it encompasses an examination of different arrangements that produce similar market effects. Such an examination is desirable, not only when evaluating existing practices, but also when considering the likely effects of implementing recommendations.

Firms integrate in order to reduce costs, to assure their source of supply and to reduce fluctuations in their costs and sales, and to increase their market shares. In industries with low concentration it is generally safe to assume that the effects of vertical integration are beneficial to society. Low concentration means that individual firms lack significant market power and thus that vertical arrangements are likely to have the effect of furthering each firm's own interest rather than the collective interests of their competitors and themselves. Actions to acquire or consolidate economic power will be absent, or at least in vain, where the end result is a competitive situation. In considering potential anticompetitive effects, therefore, the level of concentration is a useful starting point.

Numbers are, of course, only one indicator of competition. Competition can be sluggish with many firms and desperately earnest with only two or three competitors. While numbers and concentration are certainly not the only, nor always the best, single indicator of competition, they provide the best first cut at competition analysis.

The foregoing general considerations are illustrated by the Vertical Restraints Guidelines issued by the U.S. Department of Justice in 1985 which similarly stresses concentration as an initial screening device in determining when vertical arrangements should be subjected to more in-depth analysis. The essential approach of the Guidelines, a statement of enforcement policy in the United States, is encompassed in section 31.4 of Canada's Combines Investigation Act where the substantial lessening of competition is set as the standard for evaluating exclusive dealing, tied selling and market restriction. The variables or factors addressed in the U.S. Guidelines — concentration, the extent of the market covered by the arrangement or practices, and the degree to which products in the industry are differentiated — are among those examined in proceedings brought under section 31.4. While this is a report under section 47 and not a decision under section 31.4, the approach towards the evaluation of the "public interest" with respect to potential reductions in competition is similar. The differences reside elsewhere: in the breadth and scope of section 47 inquiries, in the greater burden on the Commission in sorting out issues and in the range of judgements required.

2. Downstream Vertical Integration

There are significant differences in the scale of operation required in wholesale or retail gasoline distribution and in refining. There are, accordingly, far more distributors of gasoline (and heating oil) than there are refiners. This situation mirrors that found in most other industries. The downstream petroleum industry differs from most other industries, however, in its high degree of vertical integration. There have been a few cases of backward vertical integration by distribution companies, most recently by Turbo in Calgary and, before that, by Irving Oil in Saint John. Backward vertical integration would normally be motivated by a desire to obtain secure supplies at favorable prices, but since a refinery involves a much greater capital investment and produces a much broader range of products than gasoline or heating oil, any decision to enter refining must be based on a favorable reading of broad prospects in the industry.

The distinction between backward and forward vertical integration in the petroleum industry is important, with the focus of attention here on forward vertical integration by refiners.

The effects of forward vertical integration on the demand or marketing side will be discussed initially. Some degree of forward vertical integration occurs when a firm participates in a market downstream from the one where it produces or distributes. Refiners are integrated forward when they directly perform wholesale or retail functions or enter into arrangements that create the same effects. The effects sought are to stabilize or increase sales volumes, thereby increasing the return on investment. These goals can conceivably be accomplished solely through product differentiation. If a firm can find some way of creating a large and loyal set of consumers committed to its product, the market can be relied on to ensure that the product reaches the consumers. The price at which the product reaches the consumer is determined by the wholesale price and the costs of distribution.

Prior to the 1970s most refiner participation in gasoline marketing was through franchisees. Some consumer products can easily be differentiated by design and performance differences although, as noted in Chapter XIII, at least at the present time there are very small physical differences indeed in the products produced by various refiners. Even in the case of products which appear physically homogeneous, differences in packaging and in the services attached to the product can be used for this purpose in many industries.

Manufacturers naturally wish to do what they reasonably can to ensure consumer demand for their products. Short of participating directly at the retail level through outlets they own and operate, or less fully through contractual rights with retailers, they often promote their own brand in advertising. This is sufficient for many manufacturers of prepackaged products that are presented to the consumer by others in packages bearing the manufacturer's brand. For goods and services that cannot be prepackaged for the consumer, however, the retail establishment itself is often the only or best thing that can be identified with the manufacturer's brand. This is a common characteristic of most franchise distribution systems including those for gasoline or heating oil. It is one of the few ways of promoting a manufacturer's brand to the consumer and identifying the source of the product. Exclusive supply to such outlets is a virtual necessity in order that the trademark accurately reflects the source of the goods and thereby remains valid and effective.

The other end of the spectrum, a complete absence of vertical integration, exists when a manufacturer sells a homogeneous product on the spot market. Given competing sellers, the volume of the firm's sales is totally dependent on its price, other limited means of attracting customers, and on chance. Where there is excess capacity in the industry its sales may fall above or below its previous sales or those in the next period. Some form and degree of vertical integration can be achieved through product differentiation and term contracts in numerous possible departures from homogeneity and spot sales.

The downstream vertical arrangements of refiners are discussed in the two following sections.

3. Supply Arrangements with Retail Outlets

(a) Introduction

The key variables in a supply agreement are prices, quantities, length of term, and the brand under which the product is further distributed. Quantities may be specified in the supply contract or there may be exclusive rights of supply. With respect to supply arrangements for specifically identified retail outlets, discussed below, the outlets covered by the agreements are all required to carry exclusively motive fuels provided by their supplier.[1] This provision is found in all agreements known to the Commission, including those where the supplier is an independent marketer.

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[1] Contracts with franchisees also sometimes specify minimum quantities and performance bonuses based on the volume of sales.

Ownership of the site is of obvious importance with respect to length of term. Since supply arrangements are limited in duration, ownership by a person other than the refiner leaves open the possibility that the owners will switch to another supplier when the current arrangement expires. Additionally, the refiner cannot, by means of a covenant upon sale or otherwise, permanently close down marketing sites it no longer owns.

The various types of supply relationships entered into by refiners are shown in Figure 1. They are ordered roughly according to who controls the price and length of term as reflected in the ownership of the site. In supply contracts with independent resellers ("(f)" in Figure 1) the key price-related aspects of agreements refer to the *wholesale* price.

The supply relationships summarized below are discussed further in Chapter XVI on gasoline pricing.

Figure XII-1
Gasoline Supply Arrangements Entered Into By Refiners

Type of Arrangement	Price Setting Authority	Ownership	Brand
(a) Major brand or second brand stations operated by refiners through employees or agents	Refiner	Refiner	Refiner's
(b) Branded (Dealer) Agency Agreements	Refiner or mixed	Refiner or Agent	Refiner's
(c) Branded stations operated by franchisees	Franchisee (mixed authority when franchisee is on support)	i) Refiner ii)Franchisee owns site and refiner the equipment*	Refiner's
(d) Management contracts	Refiner or mixed	Reseller	Reseller's
(e) Private brand agency agreements	Mixed or refiner	Reseller	Reseller's
(f) Contract with independent resellers	Reseller	Reseller	Reseller's

* This dual ownership arrangement is often found when there is a "cross-lease", described in the text.

(b) Major Brand and Second Brand Stations Operated by Refiners through Employees or Agents

The refiners own the product until it is sold to the end user, and they set the retail price. There is no wholesale price other than perhaps a notional one implied by subtracting the refiners' costs of operating the stations[2] from the retail price.

(c) Branded (Dealer) Agency Agreements

This is a broad designation that covers all agency agreements where the dealer distributes or sells the suppliers' branded product. One such type of agency has been in existence for many years, namely, outlets in rural areas and in smaller towns sometimes referred to as bulk agents. Many of them deliver heating oil, especially in eastern Canada, and diesel and gasoline to the farm trade. These agents own their equipment and facilities or lease them from their supplier. The supplier sets the prices and provides a per-unit commission. At the same time, the consignee/agent may be allowed to operate a similar distribution business for his own account to customers not appearing on the supplier's customer list. This business may be carried out in a similar geographical area subject to the condition that it not interfere with the agent's responsibility to the supplier.

Branded (dealer) agency agreements have been extended in more recent years to cover operators of outlets who previously would have purchased their supplies for resale. Imperial Oil has used this approach most extensively. These agents sometimes receive a fixed commission, in which case the supplier sets the price. In other cases there is a variable rate commission in which event the price-setting authority is sometimes shared.

The principal agreements in evidence in the inquiry cover arrangements between Imperial Oil and Fifth Wheel Truck Stops in Ontario covering five high volume outlets and with André, Jean-Louis and Jacques Lafond for two high volume outlets in the area of Ste-Rosalie, Québec. Refiners also had similar agreements covering a number of outlets with Southland Canada, Inc., the corporate owner of the "7-Eleven" convenience store chain. These outlets were located on property leased or acquired from the refiners.

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[2] Exactly which cost elements should be included in arriving at this notional price depends on several factors that are considered when the question of whether or not refiners improperly "squeezed" the margins of independents is discussed in Chapter XVI.

(d) Branded Stations Operated by Franchisees

There are two types of franchisees, those who lease the outlet from the refiner[3] and those who own the site of the outlet.

The latter enter into a cross-lease arrangement under which the supplier leases the property from the owner (the "head-lease") and in turn leases it back to the franchisee (the "sub-lease"). Leases usually run for renewable five-year terms, renewable for at least the second term at the option of the supplier. The franchisees in most cases become established with equipment paid for and installed by the refiner, sometimes with additional inducements in the form of loans. Sub-lessees also sometimes receive periodic payments from refiners that are tied to the volume of sales. These arrangements were the outgrowth of competition among refiners for desirable gasoline retailing sites and controlled gasoline volume.

Franchisees set their own pump prices except during periods when they receive margin support. There are various degrees of supplier influence over retail prices under the different support programs. For many years support programs have been in effect over large parts of the country.

(e) Management Contracts

Management contracts appear to have been used solely by Suncor. According to the information available in the inquiry Suncor had a management contract with Golden Triangle Oils Limited (GTO) covering eight outlets in Ontario, and with Les Pétroles Calex Ltée, covering 60 Calex outlets in Quebec. In addition, *Oil Week* reported that Spur's former Ontario retail outlets acquired by Alberta Gas Chemicals from Turbo were being managed by Suncor.

The contracts with GTO and Calex (subject to a renewal option) are long term. Under the contracts, Suncor is the exclusive supplier and has a large measure of control over the retail price except where existing contractual obligations preclude such control. These supply arrangements might be best described as temporary acquisitions; i.e., limited to the life of the contract.

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[3] Lessees and their representatives appeared as witnesses in the inquiry in a number of centres across the country. The concerns that they expressed were similar to those considered by several earlier provincial commissions of inquiry. They relate to tenure, rental obligations and operating conditions. As stated in the Commission's summary of views and concerns in Chapter III, these matters lie outside competition policy. They have been addressed by the aforesaid provincial commissions with the result that leases have been voluntarily amended by the petroleum companies in line with recommended standards. The Commission was informed that standard leases incorporating these changes are used across the country by national majors and not just in provinces such as Alberta and British Columbia where changes were recommended.

(f) Private Brand Agency Agreements

In Canada this type of supply arrangement appears to have originated with Imperial Oil and to have been used exclusively by them. As of August 1983 Imperial reported that it had such agreements with six resellers,[4] covering 119 outlets. The great majority of these outlets were located in Ontario. In the agreements with Sunys, Cencan and Cango, Imperial had the option of extending the agreement to any new outlets developed by these companies in addition to those specified in the agreement. The method of remuneration and the extent of Imperial's involvement in retail pricing varied by company and over time.

4. Contracts with Independent Marketers

(a) Long-term Contracts

A formula establishing the wholesale price is the key to this type of contract. The usual approach has been to tie the price of products to refining costs such as crude oil and wage rates. A variant is a processing agreement, in which the refiner charges so much per unit for processing crude oil acquired by or for the marketer. These types of long-term supply arrangements tend to tie the marketer exclusively to the supplier. They have been entered into by some of the largest independent marketers including Canadian Tire and Mohawk Oil.

(b) Short-term Contracts

(i) *With Price Adjustment Clauses.* In some contracts with independent marketers the wholesale price-setting formula is established with reference to prices charged other customers — e.g., so much discount off the price to franchisees (DTW price). Examples of this approach were found in contracts for one year. Exclusive supply may or may not be part of the agreement.

(ii) *Simple Purchase/Sale.* Perhaps the most common type of contract with independents is one in which the wholesale price is set at the time the contract is signed, but is subject to change upon notice of, say, 30 days by the refiner. Since the price to be charged is in effect open, exclusive supply is not a part of these agreements. Usually, maximum and minimum annual (and perhaps monthly) liftings or sales are specified. Customers will often enter into agreements with several suppliers and lift from those offering the most favorable prices at the time. The required minimum quantities are generally not enforced and appear to be frequently ignored.

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[4] Sunys International Inc., Cencan Petroleum Limited, Cango Petroleums Ltd., Southland Canada, Inc., Beverley Auto Body, Savemor Petroleum.

(c) Support

The severe price wars of the early 1980s led some refiners to provide support to independent marketers. These took the form of minimum wholesale-retail margins which were sometimes applied for *ex post*; i.e., after the wholesale prices had been experienced and the product resold. Support in these cases took the form of a rebate. A usual condition for obtaining support was that the independent did not lead the price down in the market areas in question.

5. Cost Implications of Vertical Integration

An important advantage of forward vertical integration on the cost side occurs when firms succeed in stabilizing the demand for their output so that they are better able to predict their sales. This has obvious advantages in planning output in the short run and capacity in the long run. All firms want to know the size of their market before making investments.

The cost advantages of vertical integration are related to wholesale and retail prices. Production and investment decisions can be validated in volume terms by aggressive pricing, but the cost in terms of reduced prices and profits can be high.

There may or may not be savings in transaction costs from internalizing operations. Unfortunately, it is difficult and, in most situations, arbitrary to identify and measure all of the relevant costs in comparing one set of transactions with another.

There can be little question that, with the successful introduction of self-service and the separation of gasoline marketing from its former close ties with automobile repair and maintenance, widespread vertical integration in the form of complete direct participation in the retailing of gasoline became feasible for refiners.

6. Criticisms and Concerns Arising From Vertical Arrangements

(a) Control Over Price

The Director has argued that the operation of outlets through employees, and the use of agents on an ongoing basis and during periods of margin support, have given refiners excessive control over retail prices. He also argued that since temporary support allowances to franchisees and private brand resellers are related to the prices set by the recipients, they have much the same effect as consignment arrangements.

The Director expressed concern about the extent to which pump pricing decisions had become centralized in the hands of refiners through agency and margin support programs. These data do not, in and of themselves, prove that competition has been reduced. Although replacement of numerous individual decision makers by a small number of refiners would generally be compelling evidence in the case of horizontal arrangements, this is not manifest in vertical arrangements.

Vertical integration used to be widely regarded as anti-competitive where the integrating firm possessed market power, because the market power was being "extended" to the other market. It was subsequently appreciated, however, that the market power held at one level would be passed forward in any event as a result of the level of wholesale prices with or without forward vertical integration. In the Green Book the Director argues that vertical integration creates a problem because it makes it easier for refiners to harmonize their actions.[5]

The Director's recommendations dealing with this area call for:

1. the prohibition of agency agreements entered into by refiners and others in the petroleum industry;
2. the prohibition of support programs where the amount of support is calculated in part by reference to the prices charged by the recipients.

The operation of retail outlets by refiners using employees is not attacked in the final argument of the Director. In the Green Book the Director recommended that refiners limit their participation through their principal and second brand operations to 50 per cent of retail gasoline sales, regardless of whether this participation was through employees, agents or franchisees. The objective was to expand greatly the market share of independent marketers. While the final recommendations of the Director are different in detail from the foregoing 50 per cent limitation, their general thrust is the same insofar as they could have the effect of reducing the refiners' participation in retail markets, although it is not a necessary result because the refiners could increase their company operations as a result of constraints on less complete forms of vertical integration.

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[5] The argument relates to vertical integration across all levels of the industry (Vol. I, p. 111).

It appears clear to the Commission that the refiners have sought to obtain control of the prices charged at their branded outlets. The reasons for seeking this control related to the competitive positions of individual refiners and are not by themselves anti-competitive. As discussed in Chapter V, the competitive threat of independents led refiners to realize that they had to reduce retail margins at their branded outlets or lose market share. This can be accomplished on an ongoing basis through direct retail participation or through support programs, since the latter can always be induced by relatively high wholesale prices which force dealers onto support. However, there is no simple test for determining the types of vertical arrangements entered into by refiners that are or are not anti-competitive.

Dealers often try to earn higher retail margins than refiners prefer, thereby creating a conflict situation with refiners whose competitive position improves when dealers use lower markups to achieve larger volumes. Refiners can eliminate this conflict by selling their products directly to the public through their own retail outlets. This motive for vertical integration is not anti-competitive.[6] Taken by itself, the effect of lower retail markups is lower retail prices. Dealers, of course, object to the involvement of refiners in retail markets through employees and agents, and have recommended that it be discontinued.

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[6] The reason discussed in the text is that vertical integration is undertaken to avoid the market power at a contiguous level. While dealers can hardly be seen as "monopolists", the logic of the explanation fits, nonetheless, insofar as dealers possess product differentiation advantages. Another possible reason for vertical integration could fit into the context as well. It relates to the fact that gasoline is only one source of revenue for franchisees. They can be seen as substituting other higher-profit goods and services by devoting more of their time and that of their employees to automobile repair and maintenance. It is in the interest of both lessees and petroleum companies that the property generate as high a profit to the dealer as possible. The dealer benefits directly, and the petroleum company indirectly through higher rents. In some contracts the rents are affected by sales levels from the service bays, and in all cases the petroleum companies are free to adjust rents at the end of the contract period. There may nevertheless still be a conflict which might lead to vertical integration that resides in the inability of the refiners to capture fully combined rents from refining and retailing due to the fact that profit maximization on the part of the refiner at any site would be based on its costs of production and distribution, or in some contexts the opportunity cost represented in foregone revenue from selling through some other channel, rather than on the prices it charges its dealers. Refiners would also take into account the inter-relationship of its outlets and its overall market position.

The Commission reviewed evidence on this matter submitted by the National Automotive Trades Association of Canada, The Association des Distributeurs d'Essence du Québec (ADEQ) and others. The dealers' proposal has been implemented in Maryland and has been actively studied in other states in the United States. Maryland's experience has been the subject of much study and debate. To the best knowledge of the Commission, the principal work on the Maryland results is by John M. Barron and John R. Umbeck, "The Effects of Different Contractual Arrangements: The Case of Retail Gasoline Markets", *The Journal of Law & Economics*, (October 1984, Volume XXVII (2), pp. 313-28). The thrust of the authors' findings is that prices in the affected stations were generally higher as a result of the elimination of the direct involvement of refiners in retail operations.

Based on the Commission's analysis and the results in Maryland, the movement to exclude refiners from direct participation in retail markets is not due to a concern with efficiency and lower prices to consumers, but primarily with a desire to preserve an area of commerce for small businessmen. While such a goal may be legitimately pursued by political representatives, it falls outside the scope of the "public interest" criterion in a section 47 inquiry. It is noteworthy in this connection that the Director has not supported the NATA and ADEQ proposals.

Some evidence of similar practices and objectives can be found in Nova Scotia and Prince Edward Island where provincial regulation appears to have had the effect of increasing prices to consumers.

There are, however, other aspects of the refiners' participation in retailing. There is an interaction of wholesale and retail markets that goes beyond a simple displacement forward of wholesale prices plus a retail markup. Downward pressure on retail prices can feed back to wholesale prices. If forward vertical integration leads to a more stable retail market, this can lead to higher average retail prices. For example, in the view of the Director, widespread refiner control of retail prices specifically facilitates price restorations — a rapid recovery of prices bringing a price war to an end.

Arrangements with independent marketers whereby they act as agents of refiners introduce still another element. Here a key consideration is the at least partial replacement of an independent pricing authority by one of the refiner-marketers already present in the retail market. There is, therefore, a strong and very important element of horizontal as well as vertical integration in these arrangements.

Agency arrangements are, of course, freely entered into by the private-brand companies and may even be sought by them. Such arrangements substantially rearrange the sharing of risk, with most and sometimes all of the price risk transferred to the refiner, who may be better able to bear it. The degree of risk transfer depends on whether the commission earned is independent of the retail price. The responsiveness of wholesale prices to declining retail prices also needs to be taken into consideration, since sluggishness in this domain may account for the willingness of a number of independents to abandon their more traditional role.

The Director's recommendation that agency agreements be prohibited would affect the form that margin support programs could take and the type of supply arrangements that could be entered into with private-brand marketers. Also affected would be the use of agents rather than employees in operating outlets owned by refiners.

If refiner-marketers and other suppliers were precluded from using agents, this would, it may be assumed, raise the costs of vertical integration which allow continuous control over prices, since refiner-marketers choose to operate many of their outlets using agents rather than employees. Without knowing the magnitude of the cost differences, it is not possible to know whether or not implementation of the recommendation would have a material impact on the number of outlets operated by refiner-marketers.

There is no simple test to measure whether or not forward vertical integration is anti-competitive. The type of integration, its extent, and the market context in which it takes place all need to be considered.

(b) Foreclosure Effects of Forward Vertical Integration

(i) *Exclusivity.* Exclusive supply relationships between refiners and dealers obviously entail some degree of foreclosure of existing or would-be competitors. Indeed, that is the main purpose of contracting for exclusivity, because foreclosing others assures the business for the contracting supplier.

The Director has focused on the elimination of exclusive supply in leases and other supply contracts as a means of reducing vertical integration and thus creating a larger market open to potential entrants and subject to short-term market forces. He has requested that the Commission recommend that exclusive dealing be eliminated, to be replaced, if so desired by the parties, by minimum purchase requirements. The petroleum companies have stated that implementation of the recommendation would be pointless since the minimum requirements could be set so high that they would be tantamount to a requirement for exclusive dealing. Their second objection relates particularly to franchisees: the right to sell the product of other suppliers raises serious problems of trademark validity and rights of the refiner. Simply put, can a Texaco franchisee, with an outlet displaying all the outward appearances of a Texaco outlet, sell brand "X" or a product over which Texaco has no quality control? The Director and his expert witnesses claimed that it would be feasible to avoid consumer confusion and to avoid the dealer and another supplier from having a free ride on the franchisor's trademark. As to the latter, in their view, the price for the franchised outlet could be kept separate from the price paid for gasoline. For instance, the franchisee could be charged so much per unit sold, regardless of the source of supply.

As a result of a recent settlement of litigation between a number of refiner-marketers and an organization representing franchisees in the United States, the franchisees have been permitted to sell motor fuel from other than their franchisor *on condition that it is sold through separate equipment and identified as not originating with the franchisor*. So far as the Commission is aware, the only other circumstances where there are multi-branded outlets are in the United Kingdom. There they were created as a matter of government policy in order to provide wide supplier representation and wider consumer choice in large outlets on expressways. No issue of brand misidentification exists in this case because the pumps are clearly identified as to brand. The Director, however, is asking that the gasoline or diesel should be permitted to be sold through the same equipment as that used for the supplies of the franchisor. Commingling of supplies from different sources would appear to be inevitable.

There is no apparent reason why the Director's proposal could not work if both sides of the market wanted it to. The holder of a trademark could allow others to use it in conjunction with product specification requirements. The major difficulty with the proposal is that it would have to be imposed. It would undoubtedly create additional cost for franchisors in the form of new contracts, in additional time for contract negotiation, and in determining how to deal with the entire question of brand identification. Nor is it likely that such a policy would result in the movement of much wholesale demand outside of vertical channels. If a franchisor perceived a significant disadvantage to being displaced from time to time as the sole supplier, he would be able to avoid this outcome through combined adjustments of minimum requirements and other lease terms. Furthermore, if these adjustments were to prove costly, refiner-marketers would be encouraged to replace franchisees with company employees or agents, although under the Director's proposals this alternative would be constrained as well.

Exclusive-dealing requirements also existed at one time with respect to motor oil, tires, batteries and other accessories sold by franchisees. Currently, some refiners prevent the display of others' petroleum products while others require that the motor oils of the lessor be prominently displayed. Several brands of motor oils may be stocked to meet the specialized needs of customers. This has been the subject of previous Commission study and no longer appears to be a current concern. In addition to the change in the petroleum companies' policies, there has been a significant decline in the role of their branded outlets as a source of consumer supply for these products. The only refiner who still retains exclusive rights to supply all products to franchisees appears to be Irving Oil.

(ii) *Minimum Quantity Requirements.* Another area of concern to the Commission with respect to refiners' supply contracts with independents relates to the minimum quantities where prices are unspecified and independents are in effect buying on the spot market. As noted earlier, many independents do not in fact purchase the minimums specified in their contracts. They do not do so when they have to pay more than the prices being charged by other suppliers. Refiners have generally not tried to enforce this provision of contracts. The Commission is concerned, however, that with the continued existence of the minimum quantity clauses in question, there might be attempts to do so in the future.

With flat or declining sales of refined petroleum products, there is no near-term prospect of new entry into refining. Attempts to reduce the foreclosure effects of forward vertical arrangements and loosening up wholesale markets are, therefore, necessarily directed towards increasing competition among existing participants. Perhaps more importantly, such attempts could have an important influence on facilitating imports, which could be an extremely important competitive factor in many parts of the country.

7. Retail/Wholesale Price Relationships

(a) Potential Price Squeezes

Dual distribution, whereby firms operate at two market levels and thereby are both suppliers and competitors of independents, creates a natural concern on the part of the unintegrated marketers that they will be deliberately subjected to a price squeeze by their supplier/competitors. It could be argued that the reduction in retail margins that has occurred as a result of the more active participation of refiners in retail markets is a price squeeze. However, the concern is not with reduced margins as a result of competition but with price squeezes, if and when they occur, introduced for an anti-competitive purpose. In the absence of reliable documentary evidence, motives are notoriously difficult to decipher and objective tests are desirable. They are also very difficult to formulate. The Commission develops guidelines in this regard in Chapter XVI.

The Commission has examined the margins available to franchisees and independent marketers in order both to gain a better understanding of the operation of retail and wholesale markets and to investigate whether or not there is any indication that either group was being subjected to a price squeeze. In recent years franchisees, more so than independents, have experienced a compression of their margins due to their having been on support over long periods. On the other hand, independents have complained because they did not receive support during price wars or that the level of support they received was less, and less certain, than that given to franchisees. The evidence on margins is discussed in the chapters on gasoline pricing and heating oil distribution.

(b) Refusal to Supply

The question of the availability of supply to independents has been the subject of evidence and argument. Concern about refusal to deal in the petroleum industry arises primarily because of vertical integration. A number of documents from the files of some oil companies, emanating from their marketing departments, illustrate a concern over and an opposition to sales to independent marketers with low pricing policies. Until the early 1970s Shell had a policy of not supplying independents. Until that time Imperial Oil limited its dealings with independents to very large customers such as Supertest and the Alberta Farmer's Co-operative. Imports and the availability of supply from other companies appear to have been adequate to meet the independents' needs. It is difficult to see, however, how the refusal or reluctance of two of the largest refiners, prior to the early 1970s, to make supply available could not have affected the ability of independent marketers to enter and grow.

The evidence reveals that independents generally have not had difficulty obtaining supplies in recent years. Notwithstanding any opposition or concern on the part of their marketing departments, the corporate policy of most refiners is to supply independents as a matter of policy. At the present time Irving Oil is the only refiner that is known to refuse to supply independents as a matter of policy. In the Commission's view this is a critical area since the denial of supplies is the ultimate predatory weapon. There were some difficulties during a period of shortage in 1979-80 and a case before the Commission called into question the means now available for dealing with refusal to supply applications under section 31.2 of the Act. The policy of Irving Oil of refusing to sell to independents also raises a serious question since this company controls a large part of refining capacity in the Atlantic Provinces.

The Commission addresses the entire question of the duty to supply in Chapter XX.

8. Conclusions

1. Refiners have increased their participation in retail markets in a number of ways, particularly with respect to the setting of retail prices. There is no simple test to measure whether this increase in forward vertical integration is anti-competitive. It is necessary to consider the way in which the integration is accomplished, its extent, and the market context in which it occurs. A critical element is the nature and extent of vertical relationships that are entered into with competitors, thereby increasing horizontal integration or concentration of control over key market variables such as price. This element is present whenever refiners enter into supply relationships that give them partial or complete control over the prices charged by their customer/competitors.

2. The proposal by dealer groups that refiners be excluded from all direct operation of retail outlets has not been supported by the Director. In the Commission's view the experience with such an exclusion in the state of Maryland demonstrates that, rather than increasing competition in gasoline retailing or otherwise benefitting consumers, the reverse effects probably have occurred.

3. Vertical integration provides advantages in planning output and investment to the extent that it allows firms to stabilize demand for their output and better predict their sales. While there may be savings in transaction costs from internalizing operations, the evidence required to test this is difficult to obtain and evaluate and was not presented by any of the participants in the inquiry.

XIII

The Properties of Gasoline

1. Introduction

Consumers are entitled to know the extent to which the gasoline dispensed under one brand is functionally interchangeable with gasoline dispensed under a different brand. This information is fundamental to making informed purchasing decisions. It has implications for the range of consumer choice and for the entry and effectiveness of competition by independents and lesser-known brands, and it raises questions about the appropriate role of public policy in ensuring standardized products or the availability of product quality information.

These matters were raised during the Commission's hearings and conclusions about the extent to which "gas is gas" underlay the Director's recommendation that exclusive dealing in gasoline should be prohibited. He argued that since the physical properties of the gasoline marketed by refiners were virtually identical, there was inadequate justification for exclusive dealing, (the contractual requirement that franchisees obtain all their gasoline from the supplier whose brand they display).

2. Gasoline Quality

The quality of gasoline at the pumps depends initially on the refining specifications used in its manufacture and subsequently, on the risk of contamination after it leaves the refinery. Contamination could occur, for example, during transportation if the tank trucks had been used for other materials and were not properly cleaned, although there is no evidence of this having occurred. Furthermore, there could be contamination during storage if the tanks were improperly installed or maintained, allowing water to seep in. Provincial laws govern the installation and maintenance of in-ground tanks and such matters as how close pump pipes may reach to the bottom of the tanks where impurities might accumulate.

The Commission received no specific evidence suggesting that provincial and municipal enforcement of regulations as to tank installation and maintenance was unsatisfactory, although one witness said that there was little policing of standards and suggested that this should be remedied. One oil company executive warned that "Dirty Dick" service stations in some parts of the U.S. should be avoided. There was no evidence, however, that storage contamination has been a problem in Canada apart perhaps, from very occasional and isolated instances. Indeed, a senior officer of Texaco Canada told the Commission that, aside from his loyalty to Texaco, he would probably not hesitate to buy gasoline from any gasoline outlet in Canada.

3. The Properties of Gasoline

When gasoline and other petroleum products are purchased in large volumes by commercial buyers it is done according to strict specifications. Gasoline specifications cover a number of properties and materials found in gasoline. They usually detail a maximum concentration of materials such as lead, manganese, sulphur and "gum", a minimum octane rating, and appropriate values for distillation and vapor pressure which affect the volatility of gasoline. Where there are wide differences between gasolines, motorists are likely to notice changes in fuel performance that result from differences in octane content, volatility, and vapor pressure.

(a) Volatility and Vapor Pressure

Distillation specifications relate to smooth acceleration and to ease of starting and warming an engine in cold weather and at various altitudes. Minimum vapor pressure is necessary for starting at low temperatures, but excessive vapor pressure can lead to a "vapor lock" which stops the fuel pump. Specifications for distillation and vapor pressure vary according to the season and the altitude.

(b) Octane

An insufficient octane level in gasoline will result in engine knock or ping, indicating unsatisfactory engine performance and loss of kilometers per litre of gasoline. Knock also causes piston erosion and over time can result in engine damage.

There are two principal methods for measuring octane: the research test and the motor test. In practice, the measure used most frequently is an average of the two. This is called the "road octane measure" or the "anti-knock index" and is the most useful indicator for the consumer.

The anti-knock index for regular leaded gasoline used by the Canadian General Standards Board (CGSB), discussed below, is based on a simple arithmetic average of the readings obtained in research and motor tests. The CGSB standards for regular and premium unleaded gasolines also include a minimum motor test rating. In the specifications set by refiners in various types of supply agreements among themselves, the octane specification is sometimes based on an average arrived at by giving more weight to the motor test. Given that the octane reading in a motor test is lower than in a research test, this tends to result in a higher anti-knock index than the CGSB level.

The addition of lead is the cheapest method available to a refiner to boost octane values. The reduction and eventual elimination of this element for health protection reasons has led to experimentation with various other ways of increasing the percentage of high octane hydrocarbons. Some octane-improving additives such as methanol are claimed by some to reduce the energy content (BTUs) and hence the mileage available from a given unit of gasoline, while others such as toluene or benzene are claimed to increase the energy content and mileage. Energy content is, however, only one of the considerations in selecting additives. Others include questions of stability, solubility in water, and effects on engine wear. Significant cost differences among the ways that octane levels may be increased sometimes result in refiners using or experimenting with different approaches.

Until now gasoline within any grade has been a relatively homogeneous product technologically. This could change should refiners use different methods for achieving desired octane levels. Terminal operators and wholesalers could do their own blending, to some extent, to alter octane levels or for other purposes.

"Premium" gasoline has a higher octane rating than "regular" gasoline. In-between grades of gasoline are uniquely available at Sunoco stations where the basic grades of gasoline can be blended. The octane requirements and values of gasolines vary slightly across Canada due to differences in altitude, and three zones are established for this purpose by the CGSB:

Eastern Canada (including all Ontario) and Coastal British Columbia;

Manitoba and Saskatchewan; and

Alberta, Interior British Columbia, Yukon Territory and Northwest Territories.

4. Gasoline Standards

The CGSB develops product standards through a number of committees. The CGSB is recognized by the Standards Council of Canada, the coordinating body of the National Standards System, as a national standards-writing organization. The current CGSB standards for gasolines were set in January 1979. All of the refining companies are represented on the standards-setting committee, as are the National Research Council, the Research Council of Alberta, some provincial government departments, and several large petroleum product purchasers including five federal government departments.

Prince Edward Island, Nova Scotia and Ontario require by regulation that all gasoline sold within the province meet the CGSB standards. Alberta and Quebec have set their own standards; Quebec's standards are the same as the CGSB standards and the Alberta standards differ in one minor respect, namely, the vapor pressure minimum for winter gasoline.

Based on the octane levels in Table 1 and on oil companies' evidence, refiners exceed the CGSB standards. In the words of Mr. John Stevens of Imperial Oil:

> . . . every refiner in Canada exceeds those octane standards by a fair margin and the variance in the market is by how much you exceed the standard. If you ever attempted to market regular leaded gasoline with an octane lower than those standards, you would have a hard time finding customers who would buy it because the performance would be so poor.
>
> So that is a property where consumer requirements are much stronger than the standard itself.
>
> As far as some of these other properties, the Reid vapour pressure and the distillation, . . . I think I can say in a very general statement that refiners would probably exceed those CGSB specifications in provinces where they are not law because of the lack of consumer acceptance of a product that was below that quality level.

Imperial Oil witnesses stated that 0.4 of a road octane unit was a perceptible difference for the consumer. Other technical experts placed the perceptible difference closer to one road octane unit. As stressed by witnesses for the oil companies, since there is an added cost associated with boosting octane levels refiners will only do so if they expect to derive a marketing advantage. Although a number of fairly wide differences between the highest and the lowest averages for all grades of gasoline appear in Table 1 for Montreal and Edmonton, and for premium gasoline in Regina, there does not appear to be any consistent pattern to the octane levels of the various refiners. For example, although the octane level in company "O's" premium unleaded gasoline is significantly higher than that of the output of the other two refiners whose output was sampled in Regina, a similar difference is not carried over to regular leaded and unleaded gasoline. A similar situation is

TABLE XIII-1

Average Road Octane Measures of Gasoline in a Number of Urban Areas, August 1982 to July 1983

CGSB/Company*	Premium Unleaded	Regular Unleaded	Regular Leaded
	HALIFAX		
CGSB	*90.0*	*87.0*	*88.0*
2	91.5	89.1	89.8
3	92.0	89.4	90.2
4	91.8	89.3	89.9
7	91.6	88.9	89.6
Largest Difference**	.5	.5	.4
	MONTREAL		
CGSB	*90.0*	*87.0*	*88.0*
0	91.8	89.0	90.0
1	91.8	89.6	90.6
2	91.5	89.0	89.9
3	92.0	89.4	90.3
4	91.6	88.4	89.8
5	91.4	88.3	89.5
6	91.1	88.3	89.2
7	91.7	88.8	90.0
Largest Difference	.9	1.1	1.4
	TORONTO		
CGSB	*90.0*	*87.0*	*88.0*
0	91.8	88.4	89.3
1	91.7	88.5	89.1
2	91.5	88.9	89.4
4	91.5	88.5	89.1
5	91.5	88.4	88.8
6	91.2	88.4	89.0
Largest Difference	.6	.1	.5
	SARNIA/HAMILTON		
CGSB	*90.0*	*87.0*	*88.0*
2	91.5	88.9	89.4
5	91.8	88.6	89.0
6	91.4	88.5	89.2
7	91.7	88.8	89.4
Largest Difference	.4	.4	.4

TABLE XIII-1
(cont'd)

Average Road Octane Measures of Gasoline in a Number of Urban Areas, August 1982 to July 1983

CGSB/Company*	Premiun Unleaded	Regular Unleaded	Regular Leaded
	WINNIPEG		
CGSB	*88.0*	*86.5*	*86.5*
0	91.0	87.4	88.8
2	90.5	88.0	89.0
5	90.9	87.3	89.0
Largest Difference	.5	.7	.2
	REGINA		
CGSB	*88.0*	*86.5*	*86.5*
0	91.1	88.0	87.8
1	90.7	88.1	87.9
2	90.0	88.2	87.7
Largest Difference	1.1	.2	.2
	EDMONTON		
CGSB	*87.0*	*85.5*	*85.5*
1	90.3	88.5	87.5
2	89.7	87.0	86.8
4	90.0	87.4	86.9
5	90.0	88.3	87.4
6	89.5	87.4	88.8
7	91.3	89.2	87.0
Largest Difference	1.8	2.2	1.2
	VANCOUVER		
CGSB	*90.0*	*87.0*	*88.0*
0	91.6	88.9	89.5
1	91.7	89.0	89.4
2	91.4	88.8	89.6
5	92.0	88.9	89.9
Largest Difference	.6	.2	.5

* Identity of companies is disguised by using a numerical code.

** Largest differences between average road octane measures of gasolines of companies listed.

Sources: Ethyl Corporation and Canadian General Standards Board.

repeated in Winnipeg where company "7's" regular and premium unleaded gasolines, but not its leaded, were higher in octane than those of the other suppliers. The octane measure of company "7's" gasoline is similar to that of a number of other suppliers in Central and Eastern Canadian centers. Only company "3" was at, or close to the top average in the two centers (Halifax and Montreal) where its gasoline appears. The differences between the average measurements and those of several companies are, however, small. It is thus unlikely that any company is following a consistent policy of producing a higher-octane-level gasoline to obtain a quality advantage over its competitors. In addition to whatever sampling variability there may be in the Ethyl Corporation's[1] measurements, the changes in position of the companies in different parts of the country suggest that, unless the oil companies vary by location their marketing tactics with respect to octane content, the results for any company depend on the refinery from which the supply originates.

5. Gasoline Standards and Exchange Agreements

Inter-refiner supply agreements include strict product specifications. Although they need only meet CGSB standards in five provinces, the evidence is that they invariably meet or exceed CGSB standards across Canada.

Gasoline supplied to other refiners through exchange agreements is usually the same product marketed by the supplier. Refiner/marketers almost always use the gasoline that they receive in exchange agreements without making any changes. Thus the gasoline marketed by parties to an exchange agreement will normally be exactly the same. Only witnesses for Imperial Oil stated that their company has very occasionally made changes to the gasoline that it has received in exchange, and the circumstances appeared to be unique.

6. Gasoline Sold by Independents

The gasoline purchased by independents is exactly the same as that which refiners supply to their own marketing departments and to other refiners under exchange, processing and purchasing agreements. Barring possible problems arising from contaminated delivery vehicles or inadequate storage tanks, there should be no difference therefore in the quality of gasoline available from independents and majors.

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[1] Ethyl Corporation supplies tetraethyl lead to refiners and measures the octane levels of gasolines as a service to its customers.

7. Imported Products

Another possible source of quality variation is product imports. Most importing is currently done by refiners, and a very limited amount of truckload imports are made by independents from the United States. One major company witness stated that the only instance of substandard gasoline imported into Canada that he could recall came from Europe in the 1960s. A witness from another company stated that he had been having difficulty finding abroad unleaded gasoline and winter diesel that met his specifications. There is undoubtedly a wider variation in the quality of products available internationally than is found in Canada. Of the areas in Canada most open to imports, consumers in Ontario and Quebec are now protected to the extent of the CGSB standards; consumers in the lower mainland of British Columbia are not so protected because British Columbia has not adopted the CGSB standards. However, marketers' regard for the reputation of their trademarks should generally provide adequate protection to consumers against the import of products of inferior quality.

8. Do Brand Names Represent Quality Differences?

The marketing sector witnesses from the major petroleum companies were most reluctant to agree with any suggestion that gasoline quality or performance did not vary significantly from one brand to the next. At the same time each was careful not to claim that a particular branded gasoline had superior qualities compared to that marketed under other brands. As stated earlier, one oil company executive stated that, company loyalty aside, he would not hesitate to buy gasoline from any outlet in Canada.

Although there may be little or no perceptible differences among the various brands of gasoline, this does not necessarily imply that brand names are unimportant. Leaving aside variations in offerings associated with the sale of gasoline (e.g., appearance of outlets and standards of service), trade marks may offer the consumer protection because companies who value their brand image will take special pains to safeguard quality and to compensate consumers in the event that problems with their products do arise.

9. Posting of Octane Levels and Minimum Standards

Gasoline sold in the United Kingdom is sold according to four grades, with minimum octane levels required for each grade. "Not-less-than" road-octane-level signs have been posted in the United States since 1979. Would a similar type of requirement be of benefit to Canadian consumers? One potential benefit would be that consumers would have better knowledge of the product they were purchasing. Additionally, with posted levels consumers might be offered a wider choice than presently since it would open up an avenue for more overt competition with respect to the octane content of gasoline. For example, not all consumers require fuel complying with the minimum CGSB standards nor the fuel of even higher standards that the refiners produce. The CGSB road octane standard for regular leaded gasoline in Eastern Canada is 88. The unweighted average of the research octane and motor octane levels required for "two star" and "three star" leaded gasoline respectively in the U.K. is 85 and 88. There may well be Canadian consumers who would find the lower octane level of the "two star" standard gasoline sold in the U.K. adequate for their needs. Motorists do not benefit from using higher octane gasoline than their vehicles require.

The benefits of having a wider selection of octane levels than are now available may be greater for unleaded than for leaded gasoline because it is more costly to increase the octane levels for unleaded gasoline. Thus consumers who are constrained to buy gasoline with higher octane levels than they would otherwise buy could potentially enjoy a greater cost saving in the case of unleaded gasoline.

A wider range of octane offerings would permit non-refiners a correspondingly wider choice of product imports. This could apply throughout the octane scale, including the higher end. The advantages to a seller of supplying a more costly product with superior characteristics are more readily realized when the points of superiority can be easily identified.

Whatever the potential merits for posting octane levels, there is a possible difficulty in doing so for unleaded gasoline. As noted earlier, there can be significant variations in energy content depending on the components and additives used for boosting octane levels. The posting solely of octane levels could mislead the consumer as to the overall value of the gasoline unless information regarding energy content is also supplied. However, if significant variation in energy content should develop, it may be advisable to inform consumers in any event.

The Commission has not had evidence on the market effects of the systems available in the U.K. and the U.S.; nor does it have information on the octane levels required for the entire stock of gasoline-burning vehicles. No evidence or argument was heard which specifically addressed a possible change in the Canadian grading system.

10. Conclusion

The Commission is not in a position to make recommendations in this area. It is struck, however, by the benefits potentially available from a less-restrictive grading system. There may also, of course, be costs which are less evident than the benefits. In considering costs in a preliminary way, it would be wrong to assume that a widening of consumer choice would lead to many outlets increasing their offerings. Neither diesel nor propane is available from all outlets and the same thing could easily occur with a greater range of choice in gasoline. In fact, other than for policing, there is no reason to consider costs of distributing a wider range of octanes as within the purview of public policy. This is a matter that is best left to the market.

XIV

The Retail Gasoline Market

1. Introduction

Motor gasoline is the most important petroleum product in terms of production and sales. In 1984 its share of petroleum product sales volume by refiners was 42 per cent. Gasoline's importance is even greater when sales revenues are considered. In 1984, over 45 per cent of the refined product revenues of three national petroleum companies, whose annual reports provide a breakdown, came from gasoline sales.

Retail gasoline pump sales represented 84 per cent of domestic gasoline sales. The remaining sales were to road transport and urban transit, agriculture, government, and commercial/institutional customers. This chapter examines retail gasoline marketing only.

In somewhat more than a decade there has been a radical transformation in the retail marketing of gasoline. The most striking changes have been closure of a large number of outlets, increasing sales through self-serve outlets, use of second brands by integrated petroleum companies, narrowing price differentials between offerings, an increase in company-run operations and changes in the relationships between independent marketers and their suppliers. In order to address questions relating to the extent and means of control over the retail sector exercised by refiners, an understanding of these structural changes and trends is essential, as is the information on pricing in Chapter XVI.

2. The Participants

Gasoline is marketed at retail by branded dealers of integrated petroleum companies, by branded or second-brand agents or employees of these integrated companies, and by private-brand non-refiner marketers (independents).

The principal source of retail market information used in this chapter is data collected by Kent Marketing Services Limited on the volume of sales and on the number and types of outlets (i.e., self-serve or full-service) selling under particular brands in various urban marketing areas. Sixteen urban areas across the country, accounting for 35 per cent of total domestic retail gasoline sales, are covered. Five of the sixteen areas, including Metro Toronto, are sometimes grouped together as Greater Toronto, so some of the calculations and tables relate to 12 rather than to 16 urban centers. For the most part, the data relate to the years 1974, 1980 and 1984.

Until the growth of Petro-Canada, the four integrated petroleum companies with national marketing representation were Imperial, Shell, Gulf and Texaco. The acquisition of Petrofina in 1981 and BP in 1983, combined with its earlier purchase of Pacific Petroleums in 1979, made Petro-Canada a national major. Its partial acquisition of Gulf in 1985 made its downstream organization as strong in Western Canada as it had previously been in Quebec and Ontario, and at the same time significantly increased its strength in Ontario.

Market survey data covering 12 urban areas in Canada show that Imperial, Shell, Gulf and Texaco held combined market shares for their branded (i.e., principal brand) and second-brand outlets of 59.6 per cent in 1974 and 58.4 per cent in 1980 (see Table 1 below). The 1984 data show that the combined share of these four marketers was 53.5 per cent, which is a substantial drop accounted for primarily by a decrease in Imperial Oil's market share in all centers surveyed (see Appendix J, Tables 1 to 3). This decrease is not unlike that of the Green Book period, when Imperial Oil, the leading national major, lost market share in all regions of Canada. When Petro-Canada is added, the five national majors had an estimated share in 1984 of 70.7 per cent. With the sale of Gulf assets to Petro-Canada and Ultramar in 1985 there are now only four majors, with a combined market share of approximately 68 percent (using 1984 figures).

Regional integrated companies have been a second source of retail gasoline. The regional integrated refiners currently include Irving Oil, (Saint John, N.B.), Ultramar (St-Romuald, Quebec), Suncor (Sarnia), Consumers' Co-operative (Regina), Turbo Resources (Calgary), Husky (Prince George) and Chevron (Burnaby).[1] Three regional refiners — Pacific Petroleums, Petrofina and BP — were taken over by Petro-Canada. Turbo, formerly a large independent reseller, became a refiner in 1982 and thereby added to the market share of the regional integrated companies in the Western Provinces. With the December 1, 1984 sale of its eastern retail marketing assets (the former Spur Oil outlets in Ontario) to Alberta Gas Chemicals Limited,

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[1] Petrosar sells its gasoline at wholesale to other refiners and to unintegrated marketers.

Table XIV-1

Major Refiner-Marketers' Retail Gasoline Market Shares in 1974, 1980 and 1984 (%)

	1974	1980	1984
St. John's	70.0	64.2	57.1
Halifax-Dartmouth	68.4	61.8	55.8
Saint John	43.8	34.4	28.6
Montreal	59.7	54.6	50.2
Hull	53.0	43.8	36.0
Ottawa	46.7	47.6	47.3
Oshawa-Whitby	47.9	53.4	42.9
Greater Toronto	59.3	62.6	56.1
Winnipeg	68.0	65.4	59.4
Regina	66.4	61.2	59.0
Edmonton	66.9	62.0	61.3
Vancouver	57.4	58.1	52.4
TOTAL (Wgt. Avg.)	59.6	58.4	53.5

• "Montreal" refers to Greater Montreal throughout this chapter in keeping with the Kent data presented to the Commission.

Source: Tables 1-3 in Appendix J.

Turbo's retail activity is limited to Western Canada. The combined weighted-average market shares of the regional refiners in the 12 urban centers were 25.1 per cent in 1974, 26.4 per cent in 1980, and climbed to 32.2 per cent in 1984 (see Table 2). This latter growth was due to a combination of the acquisition of independent resellers, internal growth, particularly by Petro-Canada, and the entry of Turbo. Petro-Canada is included in the "regional refiner" category to facilitate understanding of the trends; it only became a major "national" marketer with its acquisition of Petrofina in 1981 and BP in 1983.

Based on Kent market survey data for 16 cities, private-brand unintegrated marketers, or independent marketers, held a combined market share of 15.3 per cent in the urban areas surveyed in 1974, 15.2 per cent in 1980, and 14.3 per cent in 1984. After experiencing rapid growth from a very small base in the fifties and sixties, their "national" market share has been relatively stable since the early 1970s. An examination of the data in Table 3 shows both increases and decreases in the market shares of independents between 1974 and 1984. The loss of Turbo as an independent marketer accounts for the drop in independent market shares in Regina and Edmonton over these years. The 1974 to 1980 decline in Vancouver was due to the exit of Eaton's and of several of the smaller independents. The further decline after 1980 is explained by the 1981 acquisition of Merit (including Pay-N-Save) by Petro-Canada and by the entry of Turbo Resources Ltd. into refining in 1982. Without Turbo's change in status, the independents' "national" market share would have shown an increase to 15.6 per cent in 1984.

Activity by independents in the Atlantic Provinces is represented by three or fewer outlets in each of the urban centers. The limited presence of independents in the Atlantic Provinces appears to be due to a number of factors. There had been a number of independents. Irving became an integrated company and others were acquired by Petrofina. Nevertheless, there are now conditions which make entry more difficult than in other areas of the country. Irving, the biggest refiner, refuses to supply independents. Limitations on the types of outlets allowed by the Public Utilities Board in Nova Scotia and the Public Utilities Commission in Prince Edward Island severely reduce the options available for all potential entrants, particularly for independents who often need to be able to vary the conventional offering in order to be successful. In addition, the small size of most local markets poses difficulties for would-be entrants.

Table XIV-2

Regional Refiner-Marketers' Retail Gasoline Market Shares in 1974, 1980 and 1984
(%)

	1974	1980	1984
St. John's	30.1	33.1	42.8
Halifax-Dartmouth	31.0	36.6	44.0
Saint John	53.1	57.5	63.6
Montreal	31.3	31.6	36.8
Hull	30.5	33.5	39.6
Ottawa	20.0	22.0	26.7
Oshawa-Whitby	22.9	28.1	23.7
Greater Toronto	25.4	24.0	29.5
Winnipeg	9.2	15.7	19.3
Regina	15.6	17.6	34.6
Edmonton	12.7	16.9	22.7
Vancouver	25.5	28.5	37.9
TOTAL (Wgt. Avg.)	25.1	26.4	32.2

Note: Ultramar's acquisition of Gulf assets in 1985 would have increased the market share of regional refiners in some Eastern Canadian cities. Without Petro-Canada the regional refiners' market share was 15 per cent in 1984.

Source: Tables 1-3 in Appendix J.

Table XIV-3

Independents' Retail Gasoline Market Shares in 1974, 1980 and 1984 (%)

	1974	1980	1984
St. John's	—	2.7	0.1
Halifax-Dartmouth	0.7	1.6	0.2
Saint John	3.1	8.0	7.8
Montreal	9.0	13.8	13.0
Hull	16.6	22.9	24.3
Ottawa	33.3	30.4	26.0
Oshawa-Whitby	29.2	18.4	33.4
Greater Toronto	15.3	13.4	14.3
Winnipeg	22.8	18.9	21.4
Regina	18.0	21.2	6.4
Edmonton	20.4	21.1	16.0
Vancouver	17.2	13.4	9.7
TOTAL (Wgt. Avg.)	15.3	15.2	14.3

Source: Tables 1-3 in Appendix J.

As shown in Table 4 below, which provides different market coverage than Table 3, the independents lost market share between 1981 and 1984. Most of the decline occurred in 1982. This is partly explained by the loss of Turbo as a customer of Imperial Oil and Suncor when Turbo's refinery came on stream in 1982. Additional gains and losses in the independents' market shares nationally and regionally may be the result of the shifting of large reseller accounts between the six refiners surveyed by EMR and other refiners (e.g., from Shell to Chevron). A number of caveats which need to be taken into account in comparing Tables 3 and 4 are discussed in Appendix H.

The Commission believes that the market shares of the principal classes of sellers (national majors or refiners, regional refiners and independents) in these selected urban centers in any year and over time are reasonably representative of their shares nationally. More particularly, the Commission believes that based on the data available, the independents' national market share is not materially understated as supported by the EMR data in Table 4. Moreover, if it had been understated some of the participants in the inquiry who have more complete information than that entered in evidence would have placed that information on the record.

Table XIV-4

Estimated Independent Resellers' Market Shares of Total Motor Gasoline, 1981 to 1984
(%)

	1981	1982	1983	1984
Atlantic	5.7	4.8	3.5	6.5
Quebec	13.2	14.7	16.0	12.6
Ontario	18.6	16.4	16.2	15.7
Prairies	17.0	12.3	10.1	10.2
British Columbia	13.5	11.6	10.0	12.3
Canada	15.7	13.8	13.3	12.8

Notes and Sources: The estimates of independents' market shares were obtained from the Department of Energy, Mines and Resources (EMR). These figures represent the percentage of total refiner sales which were made through indirect as opposed to direct channels of trade. They are based on data reported to EMR by the four majors (Imperial, Shell, Gulf and Texaco), Suncor and Ultramar. The total sales of these refiners represented, on average, 71 per cent of industry domestic sales over the period. Thus whether the measured shares of the independents accurately reflect their true shares depends on whether the six refiners surveyed sold a greater or lesser part of their output to independents than did the other refiners. Given that Irving does not sell to independents, and that Imperial Oil and Suncor sell relatively large percentages of their output to independents, it is likely that the market shares of the independents are somewhat overstated, particularly in the Atlantic Provinces.

3. Changes in Retail Marketing — 1950 to the Present

In the 1950s and 1960s retail gasoline marketing by both the national and the regional integrated companies was characterized by many low-volume franchised stations selling the refiners' principal or major brand of gasoline. These stations provided pump-island service and car maintenance and repair services. Multiple outlets ensured motorists of convenient access to the brand, and company credit cards further facilitated this access.

In the fifties, unintegrated marketers began to enter retailing, particularly in the urban areas. Some of these were established retail chains with well-known brand names (Sears and Woodwards); others specialized in marketing gasoline (Caloil and Natomas). The independents priced below the traditional marketers and gained rapid acceptance. As discussed in Chapter V, internal petroleum company studies from the mid-sixties to the early seventies identified lower unit costs as contributing to the ability of the independents to offer gasoline at significant discounts below major-brand pump prices, and yet to earn high rates of return. The studies identified a variety of reasons for these lower costs. Some independents established on secondary locations and accordingly had lower investment-related costs. Moreover, their "no frills" stations typically required only minimal maintenance costs. Many marketed gasoline without providing separate car repair service which permitted them to use relatively unskilled labor for dispensing gasoline. Company-run operations were common primarily because centralized price decisions enabled independents to react much more quickly and often with greater flexibility than integrated marketers to changing market circumstances. They also precluded individual outlets from sacrificing volume for higher margins (and prices) as occurred in the majors' networks where individual dealers typically set the pump prices. Credit card costs were avoided by many of the new marketers, as were the costs associated with brand advertising. High average throughputs were an important source of reduced unit costs for some of the most successful independents. For the major petroleum companies, the net result was that the lower-priced offerings of the independents became increasingly appealing to a price-conscious segment of the public that was willing to buy private-brand gasoline.

During the same period and into the seventies, the role of the conventional service station declined in importance. Advances in automobile technology and design reduced the frequency of motor oil changes and tire repairs. Specialized car repair services increasingly competed with repair services traditionally offered by the service stations. The extensive retail networks developed in the fifties no longer seemed justified.

In addition to the price response of the major refiners through the use of support programs, the integrated companies also gradually modified their offerings. Several of the majors and others broadened their offerings by combining car washes with gasoline retailing, an approach not restricted to the integrated marketers. Imperial Oil, Shell and Gulf experimented with large diagnostic and automobile repair service centers. Starting in the late sixties, second-brand strategies were formulated. As of 1973, the increase in the price of gasoline relative to other consumer items, resulting from OPEC, heightened consumer price-consciousness, increased the pressure on the refiners to appeal to the growing price-conscious market, and resulted in their modifying their network of outlets. In the mid-to-late seventies numerous self-serve major-brand outlets were developed. A large number of conventional outlets were simultanously being closed. Total industry outlets declined substantially and average volume per station increased. The total number of outlets of the majors began to decline in the sixties, but the rate of closures accelerated in the mid-seventies with the development of self-serve outlets. By the end of the 1970s these trends, with the exception of second brands which had already largely served their purpose, were widespread. At the same time the price advantage that independents had once had at the pumps had narrowed considerably.

4. Second Brands

(a) Development

The "second brands" were developed by the majors in the sixties to compete in the so-called "discount-price" segment of the gasoline market. Examples of second brands are Gain and Champlain (Imperial), Beaver and Alouette (Shell), and Regent and Independent (Texaco). These outlets were invariably operated by the refiner itself in order to have direct control over the outlet's pump price. They were not identified with the refiner or its major brand. The outlets were often converted major-brand stations, with a less complete offering. Initially they did not accept credit cards and usually had no repair service. They matched the lower prices of the independents and left the less price-conscious consumers to the established major brands. (There were other independents, such as Pioneer, who tried to match the image and service characteristics of major brands and who priced at or near their level as well.) On average, the throughputs at the second-brand stations were significantly higher than those at the major-brand outlets by 1973, except for Montreal. (See Appendix J, Tables 4, 7a and 7b).

Imperial Oil stated that the second-brand outlets it operated prior to 1970 (Home, Econo and Champlain) were not aimed at the lowest-price segment of the market. In 1970, some low-price outlets were introduced by Imperial under several second-brand names, but in 1972 the Gain brand was adopted for this type of offering. Until some time in 1976, the Home and Econo outlets cross-merchandised gasoline and hardware and offered coupons by way of a price discount. When this marketing effort was abandoned, Champlain and Econo were used to compete in the low-price market segment.

Shell's second-brand outlets originated with the acquisition of eight Beaver stations in 1968. Shell also converted many major-brand outlets to Beaver and to other second brands (Savex, Gas Mart, Avanti, Alouette). Shell told the Commission that Beaver is now its only second brand.

Texaco's second brands (Regent in Ontario and Independent in Quebec) also date from the late sixties. Texaco's use of second brands has not been as extensive as that of Imperial or Shell.

Gulf's evidence was that Gulf did not set up a second-brand network even though it did operate acquired outlets under non-Gulf brands (Royalite and Henderson) for a period of time before rebranding them as "Gulf" in the early seventies.

Of the regional refiners, Suncor developed its second brands at approximately the same time as did the majors. (See Appendix J, Table 5.) Suncor has relied to a more significant extent than the national majors on its second brands (Pronto and Baron), which represented approximately 13 per cent of its retail gasoline sales in 1982. Before its acquisition by Petro-Canada, BP also marketed in Ontario and Quebec through second-brand outlets, although BP did not develop a large number of second-brand outlets until the eighties. Petro-Canada continued to operate second-brand outlets after it acquired Pacific Petroleum (Discount Gas), Merit Oil (Pay-N-Save) and BP. These former BP outlets have been operated under 24 brands (21 in Ontario and 3 in Quebec), which makes it difficult to identify them as a single marketing unit. Ultramar's second brands were the result of acquisition (e.g., Arrow, XL, Spur and Lyle).

(b) Number and Location

While the number of second-brand outlets operated by the majors has never been very large, the outlets were primarily concentrated in the urban centers where the independents were most active. Imperial Oil, which had the most extensive second-brand network, was asked whether or not the company had opened any second-brand outlets in any locations where independents were not present. Only four such sites were identified and only one of these outlets is still operated as a second-brand outlet.

The timing, locations and characteristics of the majors' second brands support the view that these brands were designed to respond to the presence of independents who were increasing their market share. The integrated companies have submitted that the public became increasingly price-conscious in the late sixties, and that the integrated companies and the private-brand marketers both moved to satisfy this price-conscious segment of market demand. Growing price-consciousness was not limited to major

Table XIV-5

Number of Majors' Second-Brand Outlets, 1970-1982

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Imperial	12	na	na	na	148	125	122	139	133	137	136	na	140
Shell	33	55	93	85	68	62	70	72	73	68	65	na	na
Texaco	na	23	27	25	22	20	20	20	55	68	46	52	na

Source: See Exhibit M-451, Tab XV-5 and Transcript, p. 26750 for Imperial, Exhibit S-32A, p. 1.085, Chart D, estimated for Shell and Exhibit R-94, Table II-6 for Texaco.

urban markets. It is unlikely that, without the success of the independents, the majors would have moved as promptly or to the degree they did to introduce second-brand offerings at prices below those of their major brands. Their commitment to their existing major-brand networks was strong. Even when Imperial Oil, Shell and Texaco did serve this price-conscious market segment, they protected their major brands by not identifying second brands as to the refiner.

(c) Recent Status

Ontario (particularly Toronto) was and has been the only province with a significant number of second-brand outlets. After 1974, the number of second brands in other parts of the country declined while those in Ontario increased until around 1981.

The elimination of the Home brand had a large impact on the number of Imperial's second-brand outlets in British Columbia. The 1976 decision regarding Home may have been induced by a request of the Minister of Energy, Mines and Petroleum Resources for British Columbia to the integrated companies to limit their gasoline sales through company-operated outlets to 33 per cent. Maintaining the second-brand outlets would have severely impeded the conversion of conventional outlets to self-serve.

In Quebec the number of Imperial Oil's second-brand outlets using the Champlain brand declined from 58 in 1974 to 20 in 1975. As noted above, a few of these outlets were converted to the Econo and Gain brands, but these had disappeared by 1978. In 1984, only two outlets branded "Champlain" remained.

By 1984 the number and market shares of second brands in Toronto had declined to slightly below the 1980 levels, while elsewhere in Ontario, they declined even more. In Western Canada, second brands of the majors disappeared in the three Prairie cities and declined by two thirds in market share in Vancouver. Only Petro-Canada in 1984 was observed to have maintained such brands in the Prairie cities as well as in Eastern Canada after it became a national refiner/marketer in the early 1980s. It also had second-brand outlets in British Columbia.

5. Network Rationalization: Reduced Number of Outlets and Increased Average Volumes

A substantial reduction in the number of outlets is one of the more dramatic changes that has characterized the period since 1970. Data submitted on behalf of Shell Canada indicate that total principal or major-brand industry outlets declined by one third between 1970 and 1980. (See Table 6 below.) This compares to a decline of only 7 per cent between 1960 and 1970. These decreases were not the result of an overall decline in demand for gasoline, since demand grew until 1980 (see Appendix J, Table 6).

Little is known about the specific location and ownership of the closed outlets. It is probable, however, that the majority of these outlets were owned by the operators, since most principal or major-brand outlets were so owned. Furthermore, many of the sites held by refiners were in urban centers and would have been candidates for conversion to self-serve. The pressures on the majors to rationalize, due to competition from independents and falling demand for repair and services at conventional gasoline outlets, would be experienced by individual operators in the form of lower backcourt receipts and lower margins on gasoline sales. The latter was, however, in large measure controlled by refiners, as discussed in Chapter XVI. This is not to suggest, however, that owner-dealers had any difficulty in finding alternative supplies. There have been no complaints to this effect. Moreover, there were a number of independent wholesalers around the country who could be looked to as alternative sources in the event that refiners were not interested. While the refiners' decisions to reduce the unit costs of retail gasoline distribution in their outlets was a very important factor in the decline in the number of outlets, it would be an error to regard the decision to close any owner-operated outlet as solely in the hands of the refiners. Not only were individual retailers subject to the market forces already mentioned, but they

Table XIV-6

**Number (and Percentage Decrease) of Major-Brand and Industry Retail Gasoline Outlets
1970, 1975 and 1980**

	1970	1975	1980	1970-1980 Decrease	
	(#)	(#)	(#)	(#)	(%)
Imperial	6,752	5,457	4,386	2,366	(35)
Shell	5,856	4,609	3,626	2,230	(38)
Gulf	5,723	4,451	2,770	2,953	(52)
Texaco	4,600*	4,444	3,538	1,062*	(23)
4 Majors Sub-total	22,931	18,961	14,320	8,611	(38)
Industry	35,703	29,986	23,952	11,751	(33)

* Estimated.

Source: See Exhibit S-5H, Table 2 which is based on data found in *National Petroleum News Factbook* and in *Oilweek*.

would also have been affected by declining population in some areas, and by rising land values in others, which increased site costs to levels that made them too expensive to use as traditional gasoline outlets.

One result of increased demand being met by fewer outlets was a growth in average volume per outlet (see Table 7 below). This was characteristic of all the major brands and of the industry as a whole between 1970 and 1980.

The change in total sales per outlet in the industry is completely captured arithmetically by changes in the number of outlets and in industry sales. The extent to which sales per outlet for any seller or group of sellers can be explained by the change in the number of their outlets and by the change in the *industry's* sales is shown by whether or not the market share of a seller or group of sellers kept up with the change in their number of outlets. As shown in Table 8 below, the change in average throughputs for all outlets in the six major urban centers[2] examined by the Commission was accounted for by a decrease of 16.3 per cent in the various categories of outlets and by the increase in industry sales of 25.6 per cent (see Appendix J, Table 12). By category of seller, the much larger increase in the national majors' average throughput compared to that of the regional integrated companies and the independents, between 1974 and 1980, was due to differences in the percentage of closures. The growth in the majors' average throughputs was very close to the sum of the absolute value of the percentage changes in the number of outlets and in industry sales. This is in marked contrast with the majors' second brands which had lower growth in average throughputs than would be expected from the percentage change in the number of outlets and the growth in overall sales volume. There was no change in the number of

Table XIV-7

Average Annual Throughputs of Major-Brand and Industry Retail Gasoline Outlets, 1970 and 1980 (Gallons)

Imperial	130,000	(1970)	319,000	(1980)
Gulf	101,592	(1970)	302,550	(1981)
Shell	127,200	(1969)	377,800	(1980)
Texaco	125,900	(1971)	262,318	(1981)
Industry	133,000	(1970)	291,000	(1980)

Sources: Exhibit M-451, Figure XV-3 for Imperial and Industry, Exhibits M-348 p. 3, M-349 p. 9 and M-416 for Gulf, Exhibit S-32A, Table C, for Shell and Exhibit M-556 for Texaco.

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[2] Montreal, Metro Toronto, Ottawa, Winnipeg, Edmonton and Vancouver.

independents' outlets. If the independents had kept up with the growth in market sales their average throughputs would have increased by 25.8 per cent rather than by 23.8 per cent, the increase which actually occurred. Only the regional refiners succeeded in attaining an increase in average throughputs which was greater than could be explained solely by the change in industry sales and the closures of their own outlets. It is interesting that the independents, as a group, did not succeed in increasing their sales in spite of a substantial number of closures by all categories of their competitors. This suggests that, to the extent that location is an important factor in market sales and the closures contributed to shifts in sales among sellers, any shifts from individual major and regional integrated marketers was to other sellers within this group.

By 1984, falling sales had resulted in declining average throughputs (Appendix J, Table 7a), except for independents in Winnipeg and regional refiners in Toronto and Vancouver. The recent acquisitions by Petro-Canada resulted in a need for it to rationalize its network further.

6. The Growth of the Self-Serve Offering

The trend towards self-serve outlets became more pronounced after 1973 (see Appendix J, Table 8). By the early 1980s, over 90 per cent of self-serve

Table XIV-8

Percentage Changes in Number of Outlets and Average Throughputs in Six Urban Centers 1974 to 1980 (%)

	Major Brands	Major Second Brands	Regional Refiners	Inde-pendents	All Outlets
Outlets	(25.3)	(55.3)	(6.0)	0.2	(16.3)
Throughputs	49.2	51.9	37.0	23.8	40.9

Notes:

1. The six urban centers were Metro Montreal, Ottawa, Metro Toronto, Winnipeg, Edmonton and Vancouver.
2. The figures in parentheses represent percentage decreases.
3. The percentage changes in outlets and throughputs for regional second brands were 111.1 and (80.4), respectively.
4. The actual sum (41.9 per cent) of the absolute value of changes in the total number of outlets and industry sales differs somewhat from the increase in throughputs per outlet in the table due to rounding and measurement errors introduced by the large changes in sales and number of outlets.

Source: Table 7b of Appendix J.

outlets were carrying refiners' brands, with two thirds of these outlets carrying national majors' brands.

Self-serve facilities were first set up in Canada in 1950 when two independents opened self-serve outlets in Winnipeg. They imported gasoline from the U.S. in tank wagon lots and marketed it through self-serve outlets at 3¢ per gallon off the then-normal major-brand retail price. However, the self-serve offering was only developed extensively when the national majors started to convert their networks to self-serve quite rapidly in the mid-seventies. With the exception of Ultramar, the regional refiners also moved to self-serve over the decade (see Appendix J, Table 9). The independents' adoption of self-serve varied according to the chain. A few (e.g., Canadian Tire and Sunys) became predominantly self-serve, but most (e.g., Mohawk, Pioneer and Top Valu) remained predominantly full-service.

Self-serve outlets, with the exception of Petro-Canada (and previously Gulf) are almost invariably operated directly by the company, and not by lessee dealers who would purchase and resell at pump prices set by the dealer. They are frequently only a gas bar, but in other instances they are combined with car washes, convenience stores or service bays. Recent reports indicate that considerable experimentation is currently taking place with differing types of cross-merchandising ideas.

7. Self-Serve: A High-Volume Urban Offering

Self-serve sales account for a much greater proportion of major-brand volumes than they do of major-brand outlets. Although only 10 to 26 per cent of the majors' outlets are self-serve (depending on the company), these accounted for 30 to 47 per cent of major-brand retail sales in 1980/1981.

Petroleum company submissions note the predominantly urban orientation of the self-serves. For example, although self-serve outlets accounted for approximately 40 per cent of Shell's principal brand direct-retail (non-jobber) sales in 1980, in the large urban areas they accounted for approximately 60 per cent of sales.

A sample survey of the Kent individual outlet data for Metro Toronto in 1980, done by the Commission, showed that the average self-serve volume for each of the national refiner and regional-refiner major-brand outlets was at least double the average throughput of their full-service major-brand outlets. Moreover, these self-serve outlets accounted for almost 90 per cent of total major-brand refiner retail sales for both national- and regional-refiner outlets surveyed. In the sample survey, self-serve outlets accounted for almost 80 per cent of the number of major-brand retail outlets for the major refiners and 65 per cent for the regional refiners.

8. New Offerings and Narrowing Price Differentials

Network rationalization, through the increasing conversion to self-serve outlets, and changes in the pricing structure of the industry have reinforced each other since the early 1970s. A driving force behind the reduction in the number of outlets on the part of the integrated petroleum companies was the desire to lower unit costs, including retail margin requirements, by achieving higher average volumes. As each company closed outlets, increased average volumes were necessary to ensure that the loss of locations would not translate into a drop in total volume and market share.

The price differentials between independents' offerings and those of the majors narrowed over the decade. That the integrated companies did not lose market share to the independents as the former closed outlets is no doubt partly due to this narrowing of the differentials. The Green Book places the median pump-price spread between the major-brand prices and those of the independents at 3.5¢ per gallon in 1965, increasing to 8¢ per gallon by 1970. Independent retailers who appeared before the Commission referred to differentials of 4¢ to 10¢ per gallon in the late sixties and early seventies. These same retailers noted that after 1973 the differentials narrowed considerably.

As price differentials narrowed because of competition, a change occurred in consumers' perception of the value to be attached to majors' brands relative to those of other marketers. According to an internal study by Imperial Oil, by 1978 the equilibrium differential (i.e., the differential where shifts in purchases among the various types of offerings are not likely to be made solely on the basis of price) between major-brand self-serve and independent full-service was two tenths of a cent per litre, and by 1981 to 1983 that equilibrium differential had fallen to one tenth of a cent per litre (see Appendix J, Table 10). This differential is most relevant for assessing the competitive position of the independent or private-brand outlets because self-service is the majors' principal type of offering for generating high volumes of sales.

In 1983 differentials in Eastern Canada between major-brand self-serve and private-brand full-service outlets mentioned in testimony were 0.2¢ per litre (or under 1¢ per gallon), and were reported to disappear sometimes for like offerings (i.e., self-serve to self-serve, served to served). Gulf was widely considered to have started the 1982 price war in Western Canada by pricing its self-serve outlets 0.5¢ per litre below the independents' full-service offerings. While the narrowing of differentials partly reflects the price wars of the eighties, it also seems to reflect a narrowing of equilibrium differentials. Considering the inflation that has occurred over the past decade, this is a very significant drop. Thus, about one quarter of motorists (those buying the independents' brands or the majors' second brands) appear to have reached the conclusion that there is little to choose between the major-brand offerings of the integrated companies and those of the independents.

The introduction of self-serve probably facilitated a marketing strategy aimed at closing the pump-price spread between offerings. The majors almost invariably controlled pricing at their self-serve outlets. In addition, the elimination of full service meant that a major-brand offering could be introduced at a lower price than the conventional major-brand offering without necessarily inducing retaliatory pricing action from competitors and without competing head-on with one's own remaining full-service offerings. The majors' desire to achieve low-cost gasoline distribution was aided greatly by the success of self-service.

Self-serve, by minimizing the labor component and by standardizing the gasoline offering, is more suited than full-service to direct operation by the integrated company itself. Company operations, once limited to second brands and to some experimental stations, are increasingly used by the integrated companies. They are generally self-serve. Self-serve also lends itself more easily than full-service offerings to extended hours, which are favored by many of the companies as a way to increase outlet volumes.

To the extent that the major petroleum companies operate their self-serve outlets themselves through employees or agents, their self-serve sales are at prices established directly by the refiners. In 1982 the percentages of self-serve outlets that were company operations were 100 per cent for Texaco, 79 per cent for Shell, 72 per cent for Imperial, and, following at a distance, Petro-Canada at 45 per cent and Gulf at 31 per cent.

9. The Increasing Importance of Company Operations

Imperial Oil, Gulf, Shell and Texaco all indicated the importance, in terms of sales volume, of outlets operated by their own employees or agents as opposed to those operated by lessee-dealers. This is demonstrated in Table 9.

Table XIV-9

Percentage of Integrated Refiner Gasoline Sales Accounted for by Company-Controlled Outlets (%)

	Company-Controlled Sales as a Percentage of Refiner Major-Brand (plus Second-Brand) Retail Gasoline Sales
Imperial	
—1980	42 (47)
—1970	7 (7)
Shell	
—1982	44 (na)
—1969	4 (na)
Texaco	
—1981	55 (na)
Gulf	
—1981	20 (na)
—1975	25 (na)
—1970	8 (na)
Petro-Canada	
—1982	na (14)
BP	
—1982	na (21)
Suncor	
—1982	49 (56)
—1973	10 (17)

Sources:

1. Imperial Oil: Exhibit M-451, p. XII-3.
2. Shell: Exhibits M-664, Tab 25151-156 and S-32A, Vol. II, p. 2.10.
3. Gulf: Exhibit M-614, item 7.
4. Texaco: Exhibit R-94, p. 171.
5. Petro-Canada: Exhibit M-630, pp. 37 to 39.
6. BP: Exhibit M-630, pp. 37 to 39.
7. Suncor: Exhibit M-560, Tables 3 and 8.

The essential feature of a company or agency operation is that the company controls the retail price. Consignment, used to support dealer operations when retail margins get too narrow, also often involves the refiner setting the pump price. Under other support programs the refiners can significantly influence pump prices. As a result, the proportion of gasoline sales that come under direct refiner influence greatly increases during widespread and prolonged price wars, as happened during 1982 and 1983.

The increase in company operations and the extent to which refiners determine the pump-price decisions have amounted to an increase in the degree of vertical integration between the refining and retail sectors. Texaco states that this increased control of pump prices enables them to "price competitively at retail and react quickly to market changes."

10. The Networks: Capacity Considerations

One cannot simply conclude on the basis of outlet closures that the total capacity of retail outlets to sell gasoline, judged by the volumes that can be pumped without creating line-ups at peak periods, has been reduced. While there was a net decrease of some 11,750 outlets between 1970 and 1980 (see Table 6), about 2,750 high-volume self-serve outlets were developed (see Appendix J, Table 8). If the average self-serve outlet can efficiently handle approximately 4.3 times the volume of the average closed outlet, total network capacity will have remained the same between 1970 and 1980.

Of greater interest are capacity changes in particular markets. The closure of full-service outlets and the development of larger self-serve facilities have almost certainly resulted in an expansion of capacity to sell gasoline in six large urban areas between 1974 and 1980 (Appendix I and Appendix J Table 11). Therefore, even though the volume of retail gasoline sales increased in this period (see Appendix J, Table 12) in these six cities, the need to utilize this additional capacity at volume levels which would be high enough for lower unit costs to be realized, probably increased competitive pressure in the retail gasoline market. The fall in consumer demand after 1980 further intensified retail market competition for the remaining retail gasoline sales volumes.

11. The Unintegrated or Independent Marketers

The most noticeable change in the marketing strategies available to some of the independent marketers is the loss of the option of "deep discount pricing" *vis-à-vis* major-brand prices. This has resulted from the strategies of the majors to develop second brands and self-serve outlets, so that the price differentials available to independents have narrowed considerably since 1973. For the independent marketers, there has been no counterpart to the network restructuring that has characterized the integrated companies (i.e., closures of outlets), perhaps because fewer changes were necessary or possible to their operation. The outlets of the successful chains grew in number over the period and their total volumes expanded with increases in demand. Overall, the number of outlets operated by independents remained constant even in the face of the decline in total industry sales after 1980. Aside from a few of the larger chains, such as Canadian Tire and Sunys which converted over 80 per cent of their outlets to self-serve, most independent marketers operate full-service facilities.

Chains have the lion's share of the independents' market share. Kent marketing data show that with the exception of Montreal and Edmonton, market shares of small independents, such as those having fewer than 5 outlets, have not kept up with total independent market shares (see Appendix J, Table 13).

The independents have always used a variety of approaches to the "backcourt" — i.e., that part of the service station traditionally designed for service bays. Depending on the chain, car washes and new forms of cross-merchandising have been substitutes for repair bays. An increasingly successful marketing strategy is the convenience-food-store/gas-bar combination. Perrette Dairy Ltd. was an early entrant into the combined convenience-store/ gasoline-marketing operation. Southland Canada ("7-Eleven"), Mac's Milk, Beckers, Provigo and Mohawk are more recent entrants. When combined with self-serve gas bars, customers are encouraged to purchase store items because they must enter the store to pay for their gasoline. Both operations also benefit from long hours. If, as in Quebec, it is not required by law that a clerk be dedicated to the sale of gasoline, the store and the gas bar can share the labor costs. The trend towards the convenience-store/gasoline combination is expected to continue.

Thus both the offerings and the prices of the integrated companies and of the independents show signs of converging. It is not surprising that several marketers who entered retailing with "no frills" outlets reported the need to subsequently upgrade their stations (e.g. Caloil/Norco, Natomas). With the introduction of bank credit cards, credit became part of the independents' offering.

Company-run operations have always been important to the independents. Most independent chains have, as noted above, retained a served offering. In some cases this might reflect difficulties in acquiring self-serve permits; in others, it might reflect the fact that the locations are not prime (i.e., potentially high-volume) sites that would justify the investment required for such facilities. For some it also probably reflects a perception of their market niche or their more limited financial resources.

The independents in the earlier period concentrated on urban locations, which the Green Book indicated were typically at the fringes of the urban areas. In more recent years, local real estate expertise has been used by independents to take advantage of entry opportunities provided by growing suburbs and other changes in urban markets. Also, several witnesses testified that the independents expanded their retail networks and sales during the seventies by moving in wherever there was a withdrawal of the majors from some of the less-populated areas. Top Valu, which supplies gasoline to its Top Valu dealers as well as to company-run operations, grew by obtaining accounts previously supplied by the majors in the rural areas. Mr. B. Millar, Vice-President of Marketing of Turbo, noted that most of the new entrants on the Prairies were operating primarily in the smaller centers. As noted earlier, however, available information does not indicate that the independents have a higher market share in all markets relative to that held by them in larger urban centers.

12. Relationships with Suppliers

The unintegrated marketers are referred to as the "independents" because they share no common ownership or brand links with their refiner-supplier(s). Accordingly, their pricing and other marketing initiatives are normally formulated independently of strategic constraints resulting from the economics of refinery operations. We therefore expect them to be a dynamic market force, contributing to service innovations and price competition at retail, as well as contributing to a responsive wholesale market because of their ability to shop around for gasoline.

As discussed in Chapter XII, the actual degree of independence in these areas varies according to the type of contractual or other arrangements existing between the unintegrated or "independent" marketer and the petroleum company supplier(s). The limitations on independence are clearest in the case of management contracts, which are arrangements whereby the petroleum company manages the independent owner's operation and guarantees a profit to the owner.

Private-brand agency agreements make unintegrated marketers agents of the refiner-supplier for the sale of gasoline under the private brand. Thus, although still frequently referred to as "independents", they lose vital characteristics of their independence. Private-brand agency agreements, which came into significant use in the late 1970s, have given the supplying refiner varying degrees of control over pump prices at the private-brand outlets. Imperial Oil appears to have initiated this form of agreement and has used it the most extensively. In the first eight months of 1983, Imperial Oil had private-brand agency agreements with six resellers who accounted for almost five per cent of Imperial Oil's Canadian gasoline sales and for 12 per cent of its Ontario sales. This type of contract appears to have been most prevalent in Ontario, where unstable prices and the existence of a particularly successful, aggressive independent (Sunys, who had such an arrangement with Imperial Oil from 1977 to 1984) probably made this form of contract appealing to unintegrated marketers. Imperial advised the Commission in the fall of 1985 that it was phasing out this type of agreement.

Crude oil-based-price-adjustment purchase/sale agreements, which place the marketer and the refiner in a relatively stable long-term supply relationship, have characterized several of the largest marketers for a number of years — e.g., Mohawk/Imperial Oil, Canadian Tire/Texaco and Turbo, who had a crude oil-based contract with Gulf prior to opening its own refinery. "Rack pricing" (discussed in Chapter XVII), recently introduced by Imperial and Shell, does not allow for price adjustment clauses in new agreements. The clauses may still apply in existing agreements.

Independents sometimes enter into exclusive-supply contracts or branded-agency-type agreements for individual retail outlets with a refiner in conjunction with leasing or acquiring the outlet from the refiner. One of the newer and more rapidly growing cross-merchandisers, "7-Eleven", is a branded or private-brand agent of a refiner at a large percentage of its outlets that carry gasoline. It operates as a branded dealer for a number of refiners at the remaining stations.

13. Summary and Conclusions

1. In the last 15 years there has been a radical transformation of retail gasoline marketing by the integrated marketers. These changes were a response to a decline in the demand for the offerings of traditional gasoline outlets. The changes were also goaded by the serious competitive threat of independent marketers which caused the integrated marketers to seek to lower distribution costs to more competitive levels. The result has been a large number of closures, reliance on self-serve in urban centers, higher average volume per outlet, and the search for new cross-merchandising mixes. These changes are all continuing to take place.

2. The large decline in the number of major brand outlets indicates the extent to which these outlets were part of a declining industry consisting of non-specialized repair and maintenance services. In the urban centers, where self-serve outlets were concentrated, gasoline-selling capacity increased and perhaps even kept up with rising gasoline demand between 1974 and 1980. Thus competitive pressures resulting from unused capacity were not reduced. The decline in sales between 1980 and 1984 increased these pressures.

3. The independents lost some of their attractiveness when the differential in prices between the majors' brands and their own started to narrow after 1973. The competitive impact of this change depends on the value that consumers place on major and independent brands. By the beginning of the 1980s very small differentials, of the order of 0.2 cents per litre, were sufficient to create gains or losses in market shares. At least one quarter of the motorists (those buying independents' brands or the majors' second brands) had apparently reached the conclusion that there was little difference between the offerings of integrated marketers and those of the independents. Thus although the narrowing of price differentials may have prevented the independents from increasing their market share, it does not appear to have had the effect of reducing it either.

4. The position of the independents has undergone what may be a long-term change. Nevertheless, independents are still in a position to occupy a number of market niches. The most promising in recent years has been in the cross-merchandising of gasoline and convenience-store services.

5. Second brands appear to have helped give the integrated marketers time to adjust their offerings without, as a group, sacrificing market share. Now that the integrated marketers' major brands are better positioned to compete for the price-sensitive segment of demand (now, for various reasons, the largest portion of demand), second brands apparently are being withdrawn.

6. The market shares for retail gasoline in 16 major centres surveyed by Kent over the decade 1974-1984 (i.e., prior to Petro-Canada's acquisition of Gulf), of the four traditional, national majors (Imperial, Gulf, Shell and Texaco) declined from 60 per cent to 54 per cent. That of the 10 regional refiner/marketers' increased from 25 per cent to 32 per cent, and that of the independent sector declined slightly to 14 per cent. Change has occurred in the membership of the "national major", "regional refiner/marketer" and "independent" groups.

7. A significant increase has occurred in the extent to which pump prices are set centrally by the refiners as a result of:

(a) an increase in the relative volume of sales through company-operated outlets, notably self-serves, and

(b) the introduction of a number of supply arrangements with independents whereby the refiner controls the pump price (i.e., agency and management contracts). (Chapter XVI addresses support programs which have had similar effects.)

8. Supply relationships between majors and independents which give the majors control over the prices charged at independents' outlets, or which prevent independents from shopping for gasoline because they are bound to a supplier as a condition for gaining access to a site, are a particular source of concern to the Commission.

9. The reduction in the number of decision-making centers regarding pump prices has been contributed to by the emergence of significant chains in the independent segment, virtually all of whom operate their outlets either directly or by agents, with the exception of those in Edmonton and Montreal. Independents with fewer than five outlets have virtually disappeared in most cities.

10. The changes that have taken place in gasoline retailing have been responsive to shifts in demand and have tended to reduce the costs of gasoline distribution.

XV

Petro-Canada

1. Introduction

Petro-Canada was incorporated by statute as a federal Crown corporation in 1975. Since 1979 it has grown, almost entirely by acquisition, to become one of the largest companies in the downstream sector in Canada. Its brand, unknown at the retail level prior to 1980, is now everywhere. As a Crown corporation that operates in a market environment, it is expected to be self-financing for operating purposes. As an agent of the Crown, it is subject to policy supervision and direction from the Government. There has been widespread disagreement and uncertainty among competitors, customers and the public generally, about its objectives and operating principles — what they are and what they ought to be. The Director appears to have changed his own view in this regard since 1981 when his Green Book was published.

Also, although it cannot be assumed that Petro-Canada will remain forever a Crown corporation owned by the Government, so long as it is, there may be certain unique "remedial" instruments available to the Government for addressing competitive concerns in the industry.

Most aspects of Petro-Canada's refining and marketing operations are addressed in other chapters of this Report as part of the Commission's analysis of general industry practices because for most purposes, there is no reason to distinguish Petro-Canada from its competitors. As indicated above, however, Petro-Canada's public ownership raises certain questions and has certain implications regarding Petro-Canada's significance and potential as a competitor in the marketplace that warrant separate comment.

2. Petro-Canada and Its Mandate

Canada's public interest, like that of all other industrialized countries, extends to ensuring an adequate and continuous supply of energy at reasonable prices. The public interest in energy also touches on matters of national security, domestic energy resource development, budget deficit considerations, the country's balance of payments, environmental matters and competition.

The increasing dependence of national economies upon petroleum products, particularly since World War II, has been reflected in the development of state-owned petroleum companies in both exporting and importing countries. It is in the national interest of exporting countries to maximize profits from their production, and in the national interest of importing countries that a continuous supply of crude oil be assured at the lowest possible cost.

Changing international supply conditions in the early 1970s intensified the concerns of importing countries regarding security of supply and prices. For Canadians, creation of a state-owned petroleum company with public objectives was one way of alleviating these concerns. Other goals were also relevant, as is illustrated by the following excerpt from a comprehensive review of energy policy conducted by the Federal Government in 1973 (*An Energy Policy for Canada*, Vol. I, pp. 18-19):

> A "national petroleum company" (NPC) would provide a vehicle by which the government could seek to obtain better knowledge of the domestic and international petroleum industries thereby providing legislators with more valid law-making insights. An NPC could act to stimulate regional development in specific areas of Canada. It could serve as a centre for Canadian research, concentrating on unique Canadian opportunities and on the potential spin-offs in industrial activity. It could play a role in determining the criteria on which the government might base its policies regarding economic rent collection. It might also play an effective role on behalf of government in relations with other countries where their state companies were active. It could assist in the development of "headquarters" activities in Canada.
>
> The decision by government to participate more extensively than at present in the energy industries rests largely on the question of whether such a decision should be based solely on economic criteria or whether government should become involved — for reasons which will accept lesser results on the commercial side for more beneficial results in terms of the development of the Canadian political community.
>
> It may be, however, that to a large degree, the benefits of state participation in the petroleum industry could be realized by means already at hand and there is no discernible void to be filled in Canada by the formation of a national petroleum company. Furthermore it can be argued that formation of such a company would serve as a cautionary signal to foreign-controlled companies thus initiating a slowdown of investment in Canada's oil and gas industry which could result in an eventual overall net cost to the Canadian taxpayer or energy consumer. With much of the most promising acreage already under permit or lease and with the already existing overabundance of service station outlets, to quote but two examples, it is probable that such a company could only be formed and become viable within a reasonable time horizon by buying-out or acquiring ongoing operations in each industry segment: exploration and production, transportation, refining and marketing. The cost of such an entry strategy would be high and would have to be borne initially by the taxpayer in the form of foregone revenues or high initial

> capital outlays, either of which would result in an increased tax burden. The justification for the formation of such a company, by definition would be mainly on other than economic grounds. The multiplicity of goals and objectives would almost certainly insure that any NPC would be commercially less efficient.

In December 1973 the Government announced its decision to create a state-owned petroleum company, and Petro-Canada was eventually created by federal statute on July 30, 1975. By section 14 of the Petro-Canada Act "The Corporation is, for all purposes of this Act, an agent of Her Majesty in right of Canada". All issued shares are held by the Government of Canada and all Petro-Canada's property is the property of the Government.

In this Report the Commission uses "Petro-Canada" to refer to the total enterprise of the corporation and its subsidiaries, although Petro-Canada technically consists of the members of its Board of Directors. The Board, which includes the Chairman and President, consists of up to 15 persons appointed by or with the approval of the Governor in Council.

The Petro-Canada Act specifies the following purposes and objects for the Corporation:

> 3. The purpose of this Act is to establish within the energy industries in Canada a Crown owned company with authority to explore for hydrocarbon deposits, to negotiate for and acquire petroleum and petroleum products from abroad to assure a continuity of supply for the needs of Canada, to develop and exploit deposits of hydrocarbons within and without Canada in the interests of Canada, to carry out research and development projects in relation to hydrocarbons and other fuels, and to engage in exploration for, and the production, distribution, refining and marketing of, fuels.
>
> 6. The objects of the Corporation are
>
> > (a) to engage in exploration for and the development of hydrocarbons and other types of fuel or energy;
> >
> > (b) to engage in research and development projects relating to fuel and energy resources;
> >
> > (c) to import, produce, transport, distribute, refine and market hydrocarbons of all descriptions;
> >
> > (d) to produce, distribute, transport and market other fuels and energy; and
> >
> > (e) to engage or invest in ventures or enterprises related to the exploration, production, importation, distribution, refining and marketing of fuel, energy and related resources.

Section 7 of the Petro-Canada Act confers virtually unlimited powers on the Corporation as a means of furthering its statutory objects. In addition to being ultimately accountable to Parliament through the Minister of Energy, Mines and Resources for the use of its powers, however, exercise of its powers is influenced and controlled by the Government in several ways.

First, the Government has power over the appointment of the Chairman, the President and the other members of the Board, and each such person is subject to removal at any time. Board members have maximum terms of three years although they are eligible for reappointment. The Deputy Ministers of Finance and of Energy, Mines and Resources, and one or two other Deputy Ministers have been Board members.

Second, Petro-Canada, like other Crown corporations, must obtain advance approval annually from the cabinet for its corporate plan, and from the Treasury Board for its capital budget. These are detailed documents and the need for this approval has resulted in regular and extensive governmental review, or "negotiation" as one Petro-Canada witness put it, of the corporation's short and longer term objectives, strategies and expected performance, and of its proposed capital expenditures, commitments, loans and guarantees. Once approved, and in the absence of formal amendment, the corporate plan and capital budget define and limit the major activities of the corporation for the forthcoming year.

Third, exercise by Petro-Canada of its statutory powers is subject to compliance with such directives as may be given to the corporation by the Governor in Council, on the recommendation of the Minister of Energy, Mines and Resources, where the Government is of the opinion that it is in the "public interest" to do so. This formal power to give binding directives to Petro-Canada has been used sparingly. It has been used only twice respecting downstream matters, namely, a directive to act as Canada's agent in the importation of Mexican crude oil pursuant to a state-to-state agreement, and a directive to use a new hydrocracking process developed in the CANMET research facility of the Department of Energy, Mines and Resources in a "real world" upgrader project in Petro-Canada's Montreal refinery.

Petro-Canada officials testified that they regularly receive requests from members of the public, and occasionally from Members of Parliament, that they do various things, but that such requests have no effect unless they make sense on a purely commercial basis.

It was, of course, recognized from the beginning that significant entry by a state-owned petroleum company into a vertically integrated industry, within a reasonable time frame and on a regionally balanced basis, would involve a very substantial investment of public funds during the entry period. Funding is provided for in the Petro-Canada Act by means of authorized share capital (initially $500 million, increased more than tenfold in 1982 to

$5.5 billion), provision for advances and loans from the Consolidated Revenue Fund, provision for the sale of preferred shares to the Federal Government, and by a general borrowing power. When Petro-Canada borrows money it has the credit and the favorable borrowing costs of the Government of Canada; money markets therefore tend to regard Petro-Canada borrowing as tantamount to that of the Government whether or not formal guarantees exist, which is a commercial plus for Petro-Canada's operations.

It was also, of course, understood that as Petro-Canada purchased assets and grew, it would increasingly generate funds from those assets, and provision is made in the statute for the payment of dividends by Petro-Canada on its issued share capital. Apart, however, from a possible political significance associated with paying dividends to the Government, or with purchasing assets from retained earnings or by incurring debt instead of by government appropriation, accounting practices or choices do not alter the fact that it is all public money. Capital budget approvals are required regardless of the technical source of the funds.

Petro-Canada's main subsidiary is Petro-Canada Inc., which is composed of two operating divisions, Petro-Canada Resources (upstream) and Petro-Canada Products (downstream).

On March 31, 1985, in his message delivered with Petro-Canada's 1984 Annual Report, Mr. Hopper, Petro-Canada's Chairman and Chief Executive Officer, announced a shift in Petro-Canada's direction:

> In the first nine years, Petro-Canada was directed to work towards Canada's energy security effectively and efficiently, without overriding concern for profitability. The Corporation has now been given a new mandate by its shareholder — to operate in a commercial, private sector fashion, with emphasis on profitability and the need to maximize the return on the Government of Canada's investment. In this regard, Petro-Canada is not to be perceived in the future as an instrument in the pursuit of the Government's policy objectives. However, the Government maintains the right as the shareholder to formally direct Petro-Canada to carry out certain activities in the national interest.

This statement was explained to the Commission as pertaining only to the way Petro-Canada proposes to conduct itself or to operate in the upstream sector. Petro-Canada regards itself as having always operated in a "commercial, private sector fashion" downstream. Mr. W.A. West, president of Petro-Canada Products, explained the above statement as follows:

> Now the upstream environment to which this quotation applies, the upstream environment was perceived by us to change during the period of 1983 and early 1984, and as you recall, our original emphasis had been put on higher risk longer

> term explorations in areas like the East Coast of Canada to get information for Canadians on the reserve potential in those longer term supply areas.
>
> Late in 1983 we perceived that our need to know was essentially satisfied, and in addition there appeared to be surplus capacity crude oil production in the world, and a gradual decline in world crude oil prices and I think the world in general was enjoying better longer term oil security. So at that time the Petro-Canada management focussed its activities in the upstream on the development of the most attractive frontier prospects.

Mr. West stated that Petro-Canada still recognizes national energy security as a corporate goal, but the practical or operational significance of his statement was unclear.

According to the evidence, the shift of emphasis from frontier exploration to shorter term profitability did not result from any particular document, government directive or Board resolution. Rather, according to Mr. West, it evolved from discussions during the approval processes for Petro-Canada's corporate plan and capital budget and from Petro-Canada's understanding of speeches given by various Ministers. The first clear public indication of a change had come in the summer and fall of 1984, and may have been influenced by a changing political climate.

The September, 1985 *Report of the Royal Commission on the Economic Union and Development Prospects for Canada* states that "it would be dangerous to leave our fate entirely in the hands of multi-national oil companies. The actions of Canadian-owned firms — especially public firms — are more likely to be consistent with expressed Canadian goals" (Vol. 2, p. 502). The Commissioners express no views on this although we note that the statement may not have much application to Petro-Canada's activities as perceived by the company. In October, 1985 Mr. West testified as follows regarding Petro-Canada's objectives and the recent restatement of its mandate:

> Q. Generally, with respect to the mandate, just to be sure I understand it, Mr. West, your position so far as the downstream is concerned has always been that Petro-Canada will not take any risks or act in any other fashion than you would if you were a totally private sector company?
>
> A. That is right, sir.
>
> Q. That same attitude toward risk investment and pricing and other policies has now been extended to the upstream?
>
> A. Yes, sir.
>
> Q. Whereas, previously, that general policy did not apply in the upstream?

A. No, I would not say it did not apply in the upstream. It is a matter of balance. There were thrusts for efficiency in the upstream certainly. But instead of concentrating on upstream so much, and certainly we were developing oil wells during that period as well, but in the frontier areas, I would say our focus has switched from a continuation of emphasis on exploration to more emphasis on development.

Q. With respect to the upstream, you will act now in a commercial private sector fashion and make investment decisions and risk decisions as if you were in the private sector?

A. Yes.

Q. Would Petro-Canada, in your view — and you have had experience in both the private sector and in the state-owned oil companies, Mr. West — recognize any types of public policy objectives at all that might influence it to act in any way different from any other private sector company?

A. No, I believe in the public policy area, all companies would probably react the same way, it would be my impression. The one distinction that we do have is where Petro-Canada might get a directive from the Government that a private sector company may not get. But in terms of general policy following, that would be the same.

Q. Apart from that, you have no special commitment to Canada or to any other public policy objective that any other oil company would not have?

A. I think the answer would be just the same in the sense that you mean it.

. . .

Q. The Minister of Energy has been reported as saying that Petro-Canada can do what it wants to do as long as it operates within the confines of national energy policy. What are those confines?

A. The national energy policy confines — I think I made reference earlier to policy directives that come down from time to time. There is the Western Accord and the Atlantic Accord, and certainly there is the Petro-Canada Act, the Financial Administration Act. We operate within all of those.

Q. To operate within the confines of the national energy policy then means no more than obey the law?

A. I guess you could say that broadly. Sometimes policy involves directions that aren't actually law I would imagine. I don't know exactly —

Q. Well, can you give me an example of something that binds Petro-Canada that doesn't bind anybody else?

A. No, I can't give you anything like that.

The popularly perceived purposes or "justifications" for Petro-Canada may be narrower than the capacity and powers with which the corporation is actually endowed by statute, and may be exceeded by the range and extent of

Petro-Canada's "visible" commercial activities. This appears to have led to certain criticisms of Petro-Canada, mainly by competitors or customers and particularly in the downstream sector, for doing things or not doing things considered appropriate for state-owned petroleum companies. We return below to the more frequently voiced criticisms.

In 1981 a senior executive of Petro-Canada summarized the principal policy motivations which lay behind the creation of Petro-Canada as being the achievement of crude oil supply security by aggressively pursuing new domestic supply prospects and by other means, the encouragement of new energy projects and the capture of more of the related technology and industrial benefits in Canada, and improvement of the level of government information and understanding for policy-making purposes and for the ongoing assessment of long term national supply alternatives.

Also with respect to the scope and extent of Petro-Canada's involvement in the industry, it has been observed by a past Minister of Energy, Mines and Resources that the presence of a large Crown corporation may help alleviate concerns on the part of some members of the public that high product prices are somehow attributable to anti-social conduct of some sort by the oil companies.

One of Petro-Canada's functions is to serve as a "window on the industry" for the government. This relates to ongoing general industry information and experience; Petro-Canada witnesses made quite clear that specific proprietary information that they might receive from others in the course of negotiating inter-refiner supply or cooperative arrangements upstream, for example, would not be disclosed to the Government or to government officials.

The breadth of Petro-Canada's activities lends itself to a wide range of energy policy initiatives. In 1981, for example, as part of the National Energy Program and pursuant to Cabinet directive, Petro-Canada International Assistance Corporation (PCIAC) was incorporated as a wholly-owned subsidiary of Petro-Canada to assist oil importing developing countries to find and develop their own domestic oil and gas in order to reduce their dependency on imported supplies. PCIAC's projects are all outside of Canada and consist essentially of offering Canadian technology and expertise to exploration, development, production and training projects. It is an instrument of Canadian Government development assistance, is financed by Canadian Government aid funds and has no impact on the earnings of Petro-Canada.

3. Growth and Integration 1975-1985

(a) Growth

Petro-Canada's entry has occurred largely by means of acquisition of other businesses. For Petro-Canada, this had the advantage of speed in achieving productive assets and good entrepreneurial and managerial skills. It avoided contributing to existing overcapacity and, with respect to the marketing sector in particular, it overcame locational disadvantages of late entry. Assembling one large enterprise by acquiring and integrating several others, however, also poses certain questions about the effect on competition. Even putting aside the increased risk of identical pricing and marketing practices that comes with tighter oligopoly, the reduction in the number of rival decision-making centers in the marketplace may dampen the forces and pressures for experimentation and innovation. The number of organizations having the expertise to identify and seize profit opportunities (e.g., unsatisfied aspects of consumer demand), and to expand, is reduced.

This is not, of course, to seek to answer in a simplistic way the questions that are raised by an acquisition program because each case must be examined on its own facts in order to seek to make informed judgements about the economic and market effects. Also, each of Petro-Canada's major acquisitions required approval pursuant to the funding and capital budget approval process applicable at the time, so that even if anti-competitive effects could be anticipated, the acquisitions were nevertheless considered by the Government to be in the overall public interest. The Commission does however, make certain general observations about the market context and probable effects of the mergers at the end of this section.

Petro-Canada commenced business in early 1976 when the Government of Canada transferred to it its interests in the Syncrude project and Panarctic Oils Limited. Subsequently, in the same year Petro-Canada purchased, for approximately $340 million, the shares of Atlantic Richfield Canada Limited, a company engaged solely in upstream activities.

Petro-Canada stated in its evidence that when it began operations in 1976 its main corporate objective was to develop frontier supplies of energy. Its next expansion of its upstream interests, however, namely the acquisition of the shares of Pacific Petroleums Ltd. in 1979, also involved the acquisition of substantial downstream assets. According to the evidence, Phillips Petroleum Company of the United States, the majority owner of Pacific Petroleums, was not willing to sell just the upstream assets. In purchasing the shares for approximately $1.5 billion, Petro-Canada therefore acquired, in addition to extensive upstream production and land rights in Canada and abroad, and certain pipeline interests, a refinery in Taylor, B.C., 376 retail gasoline outlets west of the Lakehead and approximately 50 wholesale outlets.

Petro-Canada witnesses stated that Petro-Canada's entry into marketing did not result from any belief that Canadians were somehow not being well served by the existing firms. Petro-Canada was interested, or at least willing, to acquire the refining and marketing assets of Pacific Petroleums, and to retain and rebrand them rather than sell them off, in order to test the waters downstream. According to the evidence, it was Petro-Canada's experience with the downstream assets acquired from Pacific Petroleums that led to a decided interest in further expansion downstream. The "Petro-Canada" brand at service stations was well received by consumers and downstream operations were seen as an ongoing source of revenue with which to support Petro-Canada's upstream activities and so to reduce the direct funding required from the Government.

Petro-Canada's next acquisition, in 1981, was an exclusively marketing operation, namely the shares of Merit Oil Company Limited which owned and operated 47 retail stations in and around Vancouver and Victoria. The cost was approximately $13 million and was paid for by funds that had been approved in Petro-Canada's capital budget on a general basis for marketing expansion costs in Western Canada rather than specifically for purchasing Merit. The Merit chain had been started in 1959 by Robert Brodie, an entrepreneur who originally sold imported gasoline. He had expanded by building a few excellent stations and by acquiring others, notably the "Pay-N-Save" chain in 1979. Mr. Brodie's marketing strategy had been to match the lowest price anyone else was charging in the market and to use discount coupons. In 1980 Merit was experiencing difficulty obtaining better prices from some of its suppliers and in obtaining increased supply from Petro-Canada, from whom it was receiving a satisfactory price. At the same time, according to the Petro-Canada witnesses, Petro-Canada felt that its "representation" in Vancouver and Victoria was weak because of entry barriers caused by zoning restrictions on the development of new retail outlets. The Merit sale to Petro-Canada resulted. Petro-Canada witnesses testified that Petro-Canada's interest in Merit was purely commercial and was "not inspired by an urge to fly the flag". After the acquisition, Petro-Canada increased its supply to the former Merit outlets by accelerating its liftings under supply agreements in Western Canada, by reducing the amount of its tender business and by importing some product.

Petro-Canada's largest acquisition occurred in 1981 also, namely, the purchase of shares and assets of Petrofina Canada Inc. at a cost of approximately $2 billion (although the precise figure remains subject to some controversy). With Petrofina came extensive upstream production and land rights, five per cent of the Syncrude project, interests in field gathering systems, a large refinery in Montreal (Pointe-Aux-Trembles), 949 retail outlets east of the Lakehead and a number of wholesale outlets. Although the evidence was that the majority owner of the Petrofina shares had not been willing to dispose of the upstream assets separate from the downstream assets, it is clear that Petro-Canada was committed by this time to a substantial expansion of its downstream operations.

Petro-Canada's retail sales were increasing rapidly and, at the same time, the long term adequacy of the Taylor refinery as a source of supply in Western Canada was uncertain. In order to improve its long-term security of supply, Petro-Canada negotiated a joint venture agreement with Gulf Canada in 1982 whereby it acquired a 49 per cent interest in Gulf's Port Moody, B.C. refinery for approximately $95 million.

Also in 1982 Petro-Canada agreed to acquire, for approximately $500 million, the downstream assets of BP Canada Inc. which consisted of a refinery in Montreal (Ville d'Anjou) and one in Trafalgar, Ontario, approximately 1,650 outlets (over 1,000 in Ontario and over 600 in Quebec) and approximately 200 rural agent distributors. (BP's marketing network in Ontario had largely resulted from it having acquired Cities Service in 1964 and Supertest in 1971.) At the time of the purchase agreement BP, which had just entered into an extensive and long-term reciprocal processing arrangement with Shell whereby Shell was to process for BP in Montreal and BP for Shell in Trafalgar, had already announced that it intended to close its Ville d'Anjou refinery. After completion of the purchase, Petro-Canada, which succeeded to the processing arrangement with Shell, implemented the closure of the Ville d'Anjou refinery.

With completion of the BP acquisition, Petro-Canada's Chairman announced that Petro-Canada had completed its "acquisition phase as a major emphasis" of Petro-Canada's "thrust". In addition to the refineries referred to above, its downstream assets as of 1983 consisted of approximately 3,000 retail outlets from coast to coast. The Petrofina acquisition had roughly doubled Petro-Canada's national share of retail gasoline marketing at the time, and the BP acquisition doubled that again, so that by 1984 Petro-Canada enjoyed about a 15 per cent national market share.

There was, however, still another major, exclusively downstream, acquisition to come. In 1985 Petro-Canada purchased, at a cost of approximately $1 billion, the downstream assets of Gulf Canada Limited west of Quebec. The assets consisted primarily of 1,797 retail outlets, Gulf's refineries in Clarkson, Moose Jaw, Edmonton and Port Moody (the 51 per cent not already owned by Petro-Canada), Gulf's product pipeline interests, and the real estate, supply commitments and entitlements related to those assets. Petro-Canada, which already had 3,200 downstream employees, received another 3,000 with the purchase. (It has a further 3,500 employees upstream.)

The principal stated reason for the Gulf purchase was to increase Petro-Canada's size in Western Canada relative to that of its competitors in order to improve its exposure and appeal to customers in the four Western Provinces. Petro-Canada also believed that by acquiring the refineries it would obtain more secure and competitively priced supply for its outlets. According to the evidence, Petro-Canada's senior management believes that in general terms a market share or "critical mass" in the neighbourhood of 12 per cent is necessary to permit most operational efficiencies and to secure a sufficient level of consumer familiarity with the brand to permit major brand price levels. Although its national market share prior to the Gulf purchase was approximately 15 per cent, in the Western Provinces it ran between approximately five per cent (Manitoba) and 10 per cent (B.C. and the Yukon). The Gulf purchase would raise it to around the 25 per cent level in each of the four Western Provinces.

Purchase of Gulf's Ontario assets was another matter. Although Petro-Canada already had more outlets in Ontario than any of its competitors except Shell, enjoyed in excess of a 17 per cent retail gasoline market share in Ontario and already sold 45 per cent of its total products in Ontario, Petro-Canada witnesses testified that they wanted the Ontario assets anyway because they were "attractive". The attractiveness was stated to lie in the Clarkson lubricating plant and related technology, certain as yet undefined efficiencies arising from the proximity of the Clarkson and Trafalgar refineries, Gulf's research facility at Sheridan Park, certain choice Gulf retail locations in Toronto, and increased retail representation in Northern Ontario.

It should perhaps be noted that, according to the testimony of Mr. West, Gulf's western Canadian downstream assets were only made available to Petro-Canada on the basis that it also purchase the Ontario assets. This of course would not prevent a sale of those assets by Petro-Canada, although Petro-Canada indicated that it has no intention to do so.

The Gulf purchase boosted Petro-Canada to the position of being the largest oil company in the retail gasoline sector in several regions of Canada and in the country as a whole in terms of both market share and numbers of outlets. The following table presents the basic market share information for the retail gasoline sector west of Quebec.

Table XV-1

Petro-Canada Retail Market Data West of Quebec

	Petro-Canada Before Gulf Purchase		Gulf (West of Quebec)	
	Outlets	Market Share	Outlets	Market Share
B.C. and Yukon	183(19)	10.2%	340	14.2%
Alberta & N.W.T.	118(12)	8.3	407	20.0
Saskatchewan	37	5.9	304	18.8
Manitoba	33(2)	5.1	232	21.2
Ontario	982(34)	19.7	514(2)	11.8

Notes: The numbers of outlets in parentheses denote second-brand outlets, that is, those branded as other than "Petro-Canada" or "Gulf" as the case may be. In Canada east of Ontario, Petro-Canada had approximately an additional 1,100 outlets. Petro-Canada witnesses testified that if sales to other refiners were deleted, its pre-Gulf market share in Ontario would have been between 17 and 18 per cent.

Petro-Canada estimates that 80-90 per cent of its current product sales result directly from its acquisitions and that the balance results from additional growth it has managed to achieve using both the acquired assets and others it has developed. Most of the additional growth is attributable to a positive public response to the "Petro-Canada" brand and to refurbished outlets, and represents market share gains from other vendors.

In addition to its participation in the marketing of gasoline and diesel fuel, Petro-Canada also participates in the distribution and sale of home heating oil. This involvement has resulted in part from the major acquisitions referred to above, and in part from acquisitions of local independents or of interests in their businesses. Petro-Canada has 400 agents across Canada, particularly in small communities in Eastern Canada, that deliver heating oil to customers. It also has 22 company operated outlets, 19 branded jobbers and 3 wholly owned subsidiaries in the fuel oil distribution business. In addition to that network, Petro-Canada succeeded to Petrofina's interests as a partner (typically a 49 per cent partner) in 16 small corporations with businessmen who had previously operated local fuel oil businesses as small independents. These partnerships do not necessarily all distribute under the "Petro-Canada" brand, although Petro-Canada has the right to supply such businesses if it chooses to meet the best available price.

For the sake of completeness, it may be noted that in 1980 Petro-Canada purchased a large mothballed refinery at Come-By-Chance, Newfoundland. The refinery had been built by a new unintegrated entrant in 1973 and closed in 1976. Petro-Canada has maintained the refinery in its mothballed state since 1980 and is understood to be currently attempting to sell it.

When the recent revision of Petro-Canada's upstream objectives is taken together with the enormous growth in Petro-Canada's downstream involvement, neither of which as a matter of relative emphasis seems to have been envisaged prior to 1979, the role of Petro-Canada appears to have altered very significantly over the course of its ten year existence. In part this has been attributed by Petro-Canada witnesses and ministerial statements to shifting national concerns and priorities relating to energy security and to the degree of "Canadianization" of the industry. It is not, however, for this Commission to seek to evaluate the broader rationales for Petro-Canada or for its various activities from time to time, apart from the market effects of those activities. The Commission notes that a Government Committee on privatization is examining a number of Crown corporations, including Petro-Canada, in order to determine in each case if it still plays an important public policy role and, if not, what its future should be.

(b) General Observations on the Mergers

It is not appropriate for the Commission in a general section 47 proceeding to seek to assess particular mergers against the criminal legal standards of section 33, any more than it would be to seek to adjudicate any other particular conduct by applying the substantive standards of other sections of the Act. Particular instances of conduct can only be fairly and properly assessed in proceedings commenced expressly for that purpose, with a view to the possible application of binding remedies, and the evidence and argument in such proceedings would be considerably fuller on the particular issues than is the case in the context of a wide-ranging section 47 proceeding. The Commission does, nevertheless, have some observations regarding the market effects of the mergers that have contributed to Petro-Canada's growth.

The acquisition of Merit in 1981, although small by comparison to Petro-Canada's other acquisitions, raises some serious questions in the minds of the Commissioners. Merit had depended primarily on price differentials and discount coupons as a marketing strategy, and generally sought to match the lowest price in the market. As reviewed more fully below, Petro-Canada's general pricing strategy has been to follow the price of comparable offerings, reflecting the extent of its general brand exposure and its ability to rely on nationalistic appeal in order to attract customers. Following the acquisition, Petro-Canada replaced the "Merit" brand with "Petro-Canada", continued the "Pay-N-Save" brand at most of the existing "Pay-N-Save" outlets and discontinued the discount coupon strategy. The stations rebranded from

"Merit" to "Petro-Canada" moved, with the brand change, from the lowest price in the market to the highest. Prices at the "Pay-N-Save" outlets would have moved less.

Instead of refusing additional supply to Mr. Brodie and possibly increasing the pressure on him to sell, given the tight supply conditions at the time, should Petro-Canada have taken the same steps that it in fact, subsequently took to provide additional supply to the outlets? The Commission thinks it unlikely that the public interest was served by the elimination of Merit as a vigorous, competitive force in the retailing of gasoline and as a significant independent wholesale buyer in the Vancouver and Victoria markets. (It is possible that at some point Merit would have sold out to someone else, in which event the competitive effects would have depended in part on the marketing strategies of the other purchaser.) No Canadianization objective was served by Petro-Canada's purchase; Merit was already Canadian. Any public policy justification would appear to have to be found in increased revenues for Petro-Canada resulting in part from increased gasoline prices to consumers. The Commission doubts that any such results, even if they could be viewed as a public benefit, would be sufficient to offset the prejudice to the public interest resulting from elimination of Merit as a unique competitive force both as a buyer and as a seller. The decline in the market share of the independent sector in the affected markets that resulted from the purchase persists.

The acquisitions of the downstream assets of Petrofina and BP were different. Both companies were regional majors in Eastern Canada who entered in the 1950s. It appears that when Petrofina and BP were acquired by Petro-Canada they were not vigorous forces as retailers of gasoline. Their retail networks had low average throughputs and probably required major tune-ups if they were to survive on a longer term basis. Deficiencies in their own retail operations may, of course, have led them to play disproportionately significant roles as suppliers to independents or to commercial/industrial buyers, although no complaints were made to the Commission about decreased competition in supply following the mergers. The Commission has not sought to examine in detail all aspects of these large mergers, but overall it may very well have strengthened competitive forces to amalgamate and rationalize the downstream assets of Petrofina and BP into one business enterprise with the resources, management strength and commitment to build a vigorous presence in the market. This may, indeed, be reflected in the fact that in recent years Petro-Canada's retail volumes have been increasing despite an industry-wide decline.

The Gulf purchase in 1985, however, raises other considerations. When two of five firms in an oligopoly merge, serious questions arise about the extent to which independent competitive initiative will be inhibited. The concerns are magnified when the firms are vertically integrated and the principal product is as homogeneous as gasoline. The risk is as much from "competitive interdependence" as it is from tacit understandings arising. There is less chance of discord developing from differing strategies among firms or from imbalances in supply and demand within firms. Petro-Canada's general growth up to the time of the Gulf purchase had contributed to an important loosening of the country's long-established oligopoly of four national majors, by virtue of Petro-Canada itself growing to the size of the other four, partially by taking market share from them.

Gulf had been an established national major for many years and was a competitor of Petro-Canada's from coast to coast. It was a force to be reckoned with in both the refining and marketing sectors. Indeed, Gulf is widely regarded as having been the principal cause of the price war across Western Canada in 1982 by starting to price its self-serve offering below the full-service offering of the unintegrated resellers. (Gulf did not use second brands, so may have experienced unique pricing pressures for its major (and only) brand). Also, unlike Petrofina and BP, Gulf had many good retail locations throughout Canada and several other modern, productive downstream assets.

Particular concerns arise with respect to Ontario where price wars have been common in recent years. Not only was Gulf a major competing retailer in Ontario, it was also a major competing supplier in a supply region that was facing intense competitive pressures as a result of a degree of overcapacity in both refining and marketing. Part of the acquisition involved Petro-Canada's taking over, for its Montreal refinery, the energy stream that went to Montreal from the Clarkson refinery as well as Gulf's major supply obligation to Texaco out of Gulf's Montreal refinery, something that Petro-Canada knew would probably lead to the closure of that refinery. Not surprisingly, two weeks after entering its agreement with Petro-Canada, Gulf announced that it proposed to close its refinery unless a buyer could be found who was willing to keep the refinery operating.

Certainly, even without Gulf, Petro-Canada in Ontario and in Canada as a whole, was already well above its own general "critical mass" target of 12 per cent market penetration. The Commission recognizes, of course, that such a general long-term target has less meaning for specific retail markets.

When asked to identify any economies that might reasonably be expected to result from the purchase of Gulf, particularly of the Ontario assets, Petro-Canada's answers were so general that it is impossible for the Commission to attempt to weigh anticipated economies against the less specific but nonetheless real loss to the public that results from eliminating a major competitor and tightening the existing oligopoly. The probable effects of the merger on overlapping retail capacity, research facilities, lubricating plants, refinery capacity and the like would also have to be examined. Nor is the Commission familiar with Gulf's own prognostications for its long term viability in the downstream sector. It is that type of assessment, however, that would have to occur to make a judgement as to whether there were sufficient justifications for the merger, from the perspective of market analysis, to overcome the *prima facie* prejudice to the operation of the market. The extent to which this type of assessment formed part of the Government's evaluation of the acquisition, before authorizing it, is not known to the Commission. It may be that in any event the Government considered further "Canadianization" of the downstream sector, or avoidance of further concentration in foreign hands, or some other aspect of the merger, to be of overriding public importance.

(c) Rationalization

The purchase price of shares or assets is not the only cost of a program of acquiring competitors. The costs of integrating, or rationalizing, the assets, operations and personnel of the organizations can also be substantial although it can be assumed that they are at least offset by cost savings to the organization involved.

A downstream acquisition program such as Petro-Canada has undertaken, inevitably involves some need to remove undue duplication between certain assets, particularly adjacent retail outlets that had previously been competing. The principles according to which this is done are matters of public interest as noted below. Other forces, of course, are at work too, beyond needs that arise from the acquisition. For some years, as reviewed elsewhere in this Report, the industry as a whole has been reducing the number of retail outlets significantly due to declining demand for gasoline (in recent years) and for the services of traditional outlets, to reduce costs and to take advantage of the volume capabilities of self-serve facilities in urban markets. The effect of this mix of forces on the number of Petro-Canada's retail outlets in Ontario is as follows:

Petro-Canada's Retail Outlets in Ontario

Year	Prior to Acquisition	Acquired
1979	0	11 (Pacific Petroleums)
1981	11	295 (Petrofina)
1982	317	1,020 (BP)
1985	982	514 (Gulf)

It will be noted that a substantial reduction in the number of Petro-Canada outlets in Ontario occurred after the BP purchase.

On a Canada-wide basis Petro-Canada acquired approximately 3,000 retail outlets in total from Pacific Petroleums, Merit, Petrofina and BP. As of the end of 1984 it had 2,485 outlets remaining, which means a net reduction of approximately 500 outlets over the five-year period. Over 400 of these outlets were disposed of in 1984, primarily in Ontario. It may be noted, too, that net reduction figures understate the extent to which outlets are dropped by the number of new outlets built by Petro-Canada and those attracted from other brands. This latter figure alone stood at 96 at the end of 1982 (net of those who left "Petro-Canada").

Mr. West estimated that slightly over 100 outlets would be dropped by Petro-Canada as a result of the Gulf purchase. To say that outlets will be dropped by Petro-Canada does not, of course, mean they will all be lost to the industry. Mr. West estimated that between 55 per cent and 60 per cent of the Gulf outlets were dealer-owned, and that if any such outlets were going to be dropped from the Petro-Canada network, the owners would in most cases, switch to another brand.

A few other outlets might be traded by Petro-Canada for outlets elsewhere. Further "rationalization" alternatives include changing the offering at a station (so that if two stations are close together one, for example, will offer self-serve and the other full-service), or adopting a second brand at one of two adjacent stations.

Where Petro-Canada owns the outlet the value of the site as a gasoline outlet will be weighed as against its value if it were sold either as a gasoline outlet or for some other use. As to whether it should be sold as a gasoline outlet, considerations arise as to whether a supply contract can be negotiated and, if so, whether the station would be branded "Petro-Canada".

There will be viable retail locations that Petro-Canada wishes to drop from its network and, at the same time, will prefer that they not remain selling gasoline in competition with other facilities it is retaining. The same consideration arises to some extent in the normal evolution of a marketing network but is more acute in the rationalization process following acquisition of a competitor. Petro-Canada's practice has been to dispose of such outlets subject to a "non-petroleum use" covenant which forecloses the purchaser, and others who purchase from him, from using the location for the sale of gasoline. Such covenants, of course, are only meaningful where good outlet locations are scarce, such as in urban areas, and their sole purpose is to limit entry and thereby lessen the competition that will have to be faced by one or more remaining outlets in that locale. The vendor in effect, pays a price for the restriction, which cost he expects to more than recoup in the form of higher pump prices or better volume. The prejudice to the public interest resulting from the use of such covenants is clear, and the Commission recommends subsequently in this Report that such covenants be rendered unenforceable, at least for this industry. In any event there seems to be no public interest justification for Petro-Canada utilizing non-petroleum use covenants.

4. Implications of Public Ownership

(a) Government Supervision

When the Government conducts its annual review of Petro-Canada's corporate plan and capital budget it reviews (or, as put by one Petro-Canada witness, "negotiates") broad aspects of Petro-Canada's marketing objectives and strategies including such things as product pricing policies and practices, geographic expansion, refurbishing of retail outlets and advertising expenditures. These issues all relate, ultimately, to the question of just what the public should be getting for its substantial investment in Petro-Canada.

Prior to the extensive amendments to the Financial Administration Act in 1984 affecting Crown corporations, Cabinet approval was required for Petro-Canada's capital budget (of which its corporate strategy document in practice formed an integral part). By statute Cabinet approval could only be given on the recommendation of the Ministers of Energy, Mines and Resources and of Finance and the President of the Treasury Board. Accordingly those three departments became involved in the detailed examination and review process. The 1984 amendments require that the corporate plan be approved by the Cabinet on the recommendation of the Minister of Energy, Mines and Resources (and, if required by the regulations, of the Minister of Finance), and that the capital budget be approved by the Treasury Board on the recommendation of the Minister of Energy, Mines and Resources (and, should the Minister of Finance so require, on that Minister's recommendation as well).

Sometime after approval of the corporate plan and capital budget, a summary thereof, prepared by the corporation and approved by the Minister of Energy, Mines and Resources, must be tabled in Parliament.

Although the 1984 amendments to the Financial Administration Act placed Petro-Canada in a newly defined class of Crown corporation that "operates in a competitive environment", the recommendation of the Minister of Consumer and Corporate Affairs, who is the minister primarily responsible for the maintenance of competition, is not required for corporate plan and capital budget approval or for Cabinet directives. The Commission is of the view that giving such a function and responsibility to the Minister would serve a valuable purpose in ensuring coordination and balance among different aspects of public policy that may at times be in potential conflict. It would be in the public interest to have such an institutional mechanism that ensured, for example, that issues such as Petro-Canada's purchase of Merit, or its retention of Gulf's downstream assets in Ontario, or the basis on which the Come-By-Chance refinery will be sold, or the question of whether or not Petro-Canada should follow the other refiners in adopting the new rack pricing system, were all fully considered from the perspective of their probable effects on the operation of the markets as well as from revenue, energy policy and other public perspectives. A similar type of interdepartmental consultation process, although less formalized, has been employed in implementation of Canada's foreign investment review policy. Such a role for the Minister would also appear to be consistent with the policy underlying the Director's power in section 27.1 to intervene in the proceedings of federal boards, commissions and tribunals in respect of the maintenance of competition.

Petro-Canada has become such a force in the downstream sectors that on occasion it might very well be a useful contribution to the public interest for it to adopt policies that go beyond mere compliance with the Combines Investigation Act, and that amount to Petro-Canada playing a "spoiler" role with respect to oligopolistic similarity of practices that otherwise normally occurs in an industry such as this. In other words, Petro-Canada could be required or induced in appropriate circumstances to act in such a way as to positively foster competition, rather than merely refrain from reducing it by the means proscribed by the Combines Investigation Act. The Department of Consumer and Corporate Affairs, given its mandate and expertise, would make a useful contribution to the proper evaluation of such possibilities on an ongoing basis.

The Commission does not contemplate that giving the Minister the role in Petro-Canada's affairs as recommended above would or should compromise in any way the Director's independent enforcement responsibilities under the Act.

(b) Application of the Combines Investigation Act

Petro-Canada executives testified that in its operations the corporation and its employees seek to comply with every law of the land, including the

Combines Investigation Act. There is, however, considerable doubt in the jurisprudence as to whether or not Petro-Canada is bound to do so, and some feeling exists that competition would be improved if Petro-Canada were clearly made subject to the criminal and civil provisions of the Combines Investigation Act like all other petroleum companies.

In *R. v. Eldorado Nuclear Limited and Uranium Canada Limited* (1983) the Supreme Court of Canada held that agent Crown corporations are not subject to the Combines Investigation Act to the extent that their actions are designed to effect their express statutory purposes, but that they are subject to the Act where they act outside those purposes. Uncertainties persist, however, about the precise extent to which Petro-Canada is subject to the laws of the marketplace. The Court was not called upon to construe the terms of the Petro-Canada Act or the 1984 amendments to the Financial Administration Act, or to decide the extent to which individual employees might be in a different position from that of the corporation. The effect on Petro-Canada of the Court's distinction between "acts committed in the course of fulfilling Crown purposes but in no way undertaken in order to effect Crown purposes" (not exempt) and "acts committed which are designed to effect Crown purposes" (exempt) is not altogether clear. Crown agents do, however, remain subject to common law constraints such as those relating to conspiracies to injure, tortious interference with the business of others, and the unenforceability of covenants in restraint of trade.

The two Crown corporations in the uranium case were only two of several alleged co-conspirators, and following the Supreme Court decision, the Attorney General dropped the prosecution against the others on the ground that it would be unfair to proceed against them if the Crown corporations could not also be prosecuted.

The Supreme Court noted that "the conceptual rationale underlying the doctrine of Crown immunity is obscure". Recent government proposals to amend the Combines Investigation Act indicate that the law may soon be changed to provide that agent Crown corporations will be fully subject to the Combines Investigation Act to the extent that they engage in actual or potential competition with others in a non-regulatory capacity. General support was expressed to the Commission for such a proposal and no evidence, argument or submissions to the contrary were made.

The Commission notes that if Bill C-91 to amend the Combines Investigation Act, introduced in Parliament by the Government in December, 1985, is enacted, the Act will henceforth bind agent Crown corporations in respect of their competitive commercial activities. The Commission considers that this proposed change is desirable, although the Commissioners are not clear as to what the legal status will be of acts done pursuant to specific Government directive, or pursuant to approvals of corporate plans and capital budgets. In the Commission's view Petro-Canada and its employees should be fully subject to the provisions of the Combines Investigation Act except to the extent that acts are done pursuant to specific Government directive or approval. The Government should remain solely and publicly accountable for such directives or approvals.

(c) Special Privileges and Responsibilities in the Marketplace?

Apart from whatever special legal status Petro-Canada might enjoy, its public ownership does give it special advantages or potential advantages, relative to its competitors, with respect to finance costs and market promotion.

Some hold the view that because Petro-Canada is an instrument of public policy, and because its extraordinary growth has been funded at great public expense, it should assume special responsibilities to foster competition in the marketplace. The Commission has touched upon this subject in section (a) above.

Petro-Canada itself does not accept any special responsibilities to foster competition except to the extent that it may be required to do so by government directive or in the implementation of its corporate plan or capital budget. Although there was some reference in the testimony of Petro-Canada witnesses to the company seeking to act as a "major trendsetter", it is clear that Petro-Canada's overriding downstream objective is to make as much money as it possibly can in a lawful manner.

A number of the concerns expressed regarding Petro-Canada lie outside the mandate of the Commission. Large-scale involvement in downstream activities, particularly in the marketing sector, has given rise to most of the critical attention Petro-Canada has received. Some members of the public resent the large expenditures made for acquisitions and ask why Petro-Canada does not at least force down the pump prices of gasoline. Some competitors complained to the Commission that Petro-Canada takes unfair advantage of its public ownership by engaging in nationalistic advertising, and by making downstream expenditures on a scale that a private sector company that has to pay normal financing costs would not make. They say that some of Petro-Canada's investments at the retail level, and the extent of its advertising, do not reflect the "discipline of red ink" to which private sector companies are subject, that some of those decisions by Petro-Canada are inefficient and would not be made by the private sector, and that they have an unfair effect on competitors.

A similar complaint was to the effect that Petro-Canada occasionally prices product below cost, or below cost plus a reasonable margin, and that such pricing practices also reflect the privileged funding arrangements enjoyed by Petro-Canada.

Apart from questions of mergers, predatory pricing and the relationship of prices charged to different categories of customers, which are dealt with elsewhere in this Report, the Commission does not assess in detail most of the above criticisms. Such complaints will be of interest to management, to Government and to Parliament. It is not for the Commission to decide what is an appropriate return for such investments, or over what period of time. The Commission does note, however, that capital investment and marketing costs of various types are often unusually high during market entry. Also, Petro-Canada is a Schedule C, Part II Crown corporation under the Financial Administration Act which means that it operates in a competitive environment and "is not ordinarily dependent on appropriations for operating purposes". Most of the senior operating management of Petro-Canada have had extensive experience in the private sector including, as a group, senior experience with Imperial Oil, Gulf, BP, Pacific Petroleums and Fina, and are accustomed to operating under private sector constraints and goals.

The role that Petro-Canada should play vis-à-vis the public interest is a matter to be defined and determined by the Government and Parliament. As part of that public interest, we believe that account should be taken, given Petro-Canada's size and influence, of its role in the marketplace and its effects on consumers. Varied objectives may come into play but those to whom Petro-Canada is accountable must make the final determination. Accountability towards Government can be improved, as suggested earlier, by having the Minister of Consumer and Corporate Affairs more directly involved in the supervision of Petro-Canada's affairs. Accountability towards Parliament could, in our view, be best achieved by bringing the Corporation fully under the terms of the Combines Investigation Act and through an in-depth review every five years of the Petro-Canada Act by a Parliamentary Committee. In this review Members of Parliament would be free, of course, to ask any questions whatsoever based on a submission from Petro-Canada itself. However, it would be consistent with the mandate of the Minister of Consumer and Corporate Affairs if at that time he was also to submit a report on how he believes Petro-Canada is operated vis-à-vis those aspects of the public interest he speaks for, namely competition policy and the consumer interest. Accountability and disclosure still remain one of the best ways of ensuring good corporate behaviour and for removing doubts about the role of a Crown corporation which can create false expectations or mistrust.

Petro-Canada's general pricing policy is addressed in the next section of this chapter.

As to any special role Petro-Canada might play as a supplier to independent resellers, the Director made the following recommendation to the Commission in his Green Book in 1981:

> A major responsibility of Petro-Canada should be the expansion of its refinery operations in order to act as a supplier to independent resellers, whether or not the latter sell under the Petro-Canada logo.

Petro-Canada has acquired seven refineries since that date from Petrofina, BP and Gulf, but only in conjunction with the marketing networks of those companies.

The evidence before the Commission was that Petro-Canada has acted as a significant supplier to the independent reseller sector and that it has provided price support on an individually negotiated basis during volatile and severe price wars. In order to seek to balance its distribution system Pacific Petroleums had consistently made an effort to sell a significant portion of its refinery output to unintegrated private brand resellers, and Petro-Canada made no deliberate change to that policy when it acquired Pacific Petroleums. The evidence was that as of the end of 1982 Petro-Canada was selling close to 20 per cent of its products to private brand resellers. For the period January-August 1985 Petro-Canada and Gulf made the following sales to independent resellers west of Quebec, as percentages of their total domestic sales (excluding sales to other refiners):

Sales to Independent Resellers, 1985

	Petro-Canada	Gulf
Western Region	28%	15%
Ontario	11%	15%

The difficulty with trying to impose an *a priori* supply obligation such as the Director had proposed is that the independent sector by and large stresses gasoline and heating oil and does not market "the full barrel" of refined products, and, also, smaller independents tend not to lift their contract commitments as predictably as other buyers. Indeed this fickleness, as they continuously search for the best price, makes an important ongoing contribution to the operation of the market.

In his final submissions to the Commission the Director did not pursue his earlier recommendation regarding Petro-Canada and did not otherwise urge that Petro-Canada be treated any differently from any of its competitors.

The general subject of the duty to supply is addressed elsewhere in this Report and forms part of the Conclusions and Recommendations.

(d) Pricing Policy

Petro-Canada is in some respects in an awkward position when it comes to determining its overall pricing policy. If it is perceived to charge the highest prices in the market consumers may well complain. And yet the public, through the Government, wants to stop the financial drain and perhaps recover something in direct financial terms from its investment in Petro-Canada. Also, if Petro-Canada should attempt to price below the other major national brands its competing retailers, large and small alike, will complain that they are being abused by their own government through a corporation they helped pay for with their own taxes. The Government itself has no doubt considered these questions in the context of its policy supervision of Petro-Canada.

Petro-Canada has adopted a general strategy of charging what the market will bear, which for the "Petro-Canada" brand means pricing at the upper end of the price spectrum with the other major brands. Petro-Canada witnesses put it as follows in late 1983:

> Q. . . . do I take it that by operating the downstream business on a commercial basis that Petro-Canada operates it with the goal of making, generating as much revenue as possible over the longer run out of the downstream operations, that that is the principal guiding object of its downstream operations?
>
> A. (McNicholas) That is correct.
>
> Q. That in terms of its retail prices, its object is to charge prices as high as the market will bear in any particular case?
>
> A. (McNicholas) I think it is fair to say that our shareholder, the Government, has not articulated a public policy role which would cause Petro-Canada to behave in the downstream in a fashion radically different from any of the other major companies in the business.
>
> Q. But the principal object of Petro-Canada in its marketing operations is really to make as much money as it possibly can selling gasoline?
>
> A. (McNicholas) That is generally correct. If prices were to reach a point where there were serious policy concern on the part of the Government, then perhaps it would wish to indicate a policy direction to us. To this point it has not done so.
>
> Q. With respect to attempting to limit the level of prevailing gasoline prices?
>
> A. (McNicholas) Yes.

> A. (MacKenzie) Could I maybe just expand on that?
>
> Q. Yes.
>
> A. (MacKenzie) Our role is not simply just to sell gasoline and we have the whole barrel to sell, so we are trying to maximize the income for the entire barrel, not just for gasoline.

At the same time Petro-Canada has sought to follow, rather than to lead prices upward, either in general or during price wars. In the words of Mr. West, "we have found that we cannot afford to have a high price image as the national oil company and for that reason we follow the market: we generally do not initiate price changes". Although the rationale of this policy is stated in public ownership terms it may be assumed that no company wishes to be perceived as usually having the highest prices in the market. Petro-Canada acknowledged that despite its general policy of being a price follower it, like the other majors, leads prices both up and down in specific markets from time to time. Indeed, some of Petro-Canada's competitors, including Mr. Irving of Irving Oil, were critical of Petro-Canada for leading prices down on occasion.

Petro-Canada's pricing policy at its second brand outlets appears to be similar, in that it generally charges prices at about the same levels as other "unbranded" outlets.

Recently Petro-Canada pricing policy has been the subject of concern in the House of Commons and there have been at least two recent occasions when Petro-Canada led the price down in a number of markets.

5. Conclusions

1. The rapid growth of Petro-Canada by acquisition since 1979 has been a mixed blessing in terms of competition in the downstream sector. Although it has increased concentration significantly, it has at the same time consolidated the regional refining and marketing operations of several companies into a potentially stronger competitive force throughout Canada.

2. Petro-Canada witnesses testified that the company endeavors to comply with the Combines Investigation Act, and if Bill C-91 is enacted it will be required by law as an agent Crown corporation to do so. The fact that it is Government-owned, however, offers a unique opportunity to go further and to use Petro-Canada's potential to promote competition in an industry where the extent of concentration in conjunction with

vertical integration continually threatens the vigor of market forces. The small and geographically dispersed nature of the Canadian market, and the magnitude of refinery investment due to economies of scale in particular, make significant degrees of market power in the Canadian downstream sector unavoidable. Petro-Canada gives the Government the opportunity to reduce the competitive restraints and associated public cost of that market power, not only without having to pass special laws, but also in ongoing pervasive ways that probably could not be achieved by laws.

3. The Commission does not have in mind the possibility of government pressures or directives to Petro-Canada with respect to particular aspects of performance, such as reducing pump prices at particular places or times or in particular amounts, because such regulatory-like interventions may do more harm than good. Additionally, Petro-Canada should not be required to act in a way that would harm its competitive position. Rather, the Commission has in mind the pursuit of broad market policies, relating for example, to negotiated discounts from listed rack prices, that can limit the oligopolistic similarity or identity of practices that normally would tend to develop and that can have many of the adverse effects of horizontal agreements among competitors. The Government could have this influence by ensuring that possible improvements to the operation of product markets in Canada were given some priority when Petro-Canada's corporate plans and capital budgets were being settled.

XVI

The Pricing of Gasoline

1. Introduction

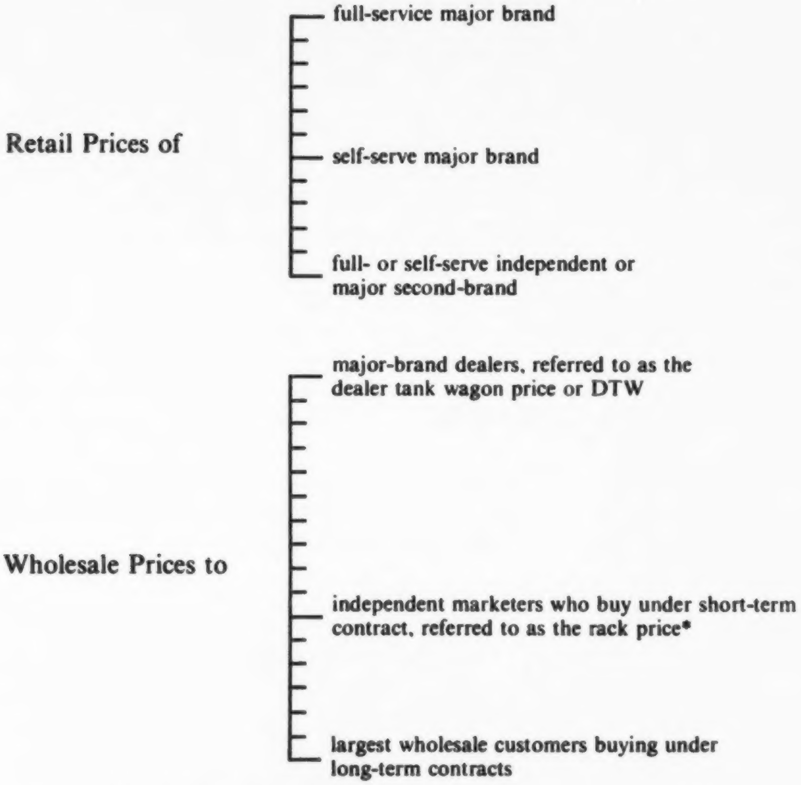
The key question in this chapter is whether the participation of refiners at the retail level, or the nature of their participation, enhance their control over retail and wholesale prices so that prices to the public are increased. A second important question is whether such reductions in the margins available to independents and dealers, as may have occurred, resulted from anti-competitive "squeezing" by refiners or, instead, were due to acceptable behavior. Analysis of both questions requires considerable information.

The basic hierarchy of retail and wholesale gasoline price categories are set out in schematic form in Figure 1. The supply arrangements under which the wholesale prices are set are described in section 2.

The hierarchy set out in Figure 1 holds, on average, over the long run, but because some of the wholesale prices are inflexible at times, the rank order is subject to change; the rack price sometimes falls below the long-term contract price or, during periods of very volatile prices, retail prices can even fall below one or more of the wholesale price levels. The compression or inversion of wholesale and retail prices has given rise to margin support programs by refiners under which various arrangements exist for establishing wholesale prices. Support programs were one of the most controversial subjects of the inquiry because of the varying degrees of influence they give the supplier over its customer/competitors' retail prices. Support programs are described in section 3. Other forms of supplier arrangements that result in refiners' control of retail prices are discussed in section 4. These two sections address the principal question in this chapter raised by the participation of refiners in retail price setting.

The cost of gasoline retailing in self-serve outlets is discussed in section 5. Apart from its purely descriptive interest, the topic is important for comparing the majors' retailing costs with the margins earned by their dealers (section 6) and by the independents (section 7). If the majors' costs exceeded either of these margins it would mean that the majors were earning more from their sales to wholesale customers than from their sales at retail.

FIGURE XVI-1.
Schematic Hierarchy of Retail and Wholesale Gasoline Prices


Retail Prices of
full-service major brand
self-serve major brand
full- or self-serve independent or major second-brand
Wholesale Prices to
major-brand dealers, referred to as the dealer tank wagon price or DTW
independent marketers who buy under short-term contract, referred to as the rack price*
largest wholesale customers buying under long-term contracts

* Prices paid by commercial and industrial customers generally fall between the DTW price and the rack price.

For example, assume that the retail price net of all relevant taxes is 30¢/l, that the price to wholesalers is 26¢/l, and that the refiner's own cost of selling at retail is 5¢/l. The refiner would have net earnings of 25¢/l from selling at retail compared to 26¢/l from sales to wholesale customers. If this continued for any time it would raise questions as to why refiners were not trying harder to sell to wholesale customers who represented the higher profit markets, which would tend to reduce wholesale prices and would have the effect of increasing the margins earned by their wholesale customers. A question would also arise as to whether the majors were intending to exert a price squeeze. Neither costs nor margins are easily measured, however, and the Commission has approached the empirical results with caution.

Price wars are discussed in section 9. They are a subject of great interest to the general public, who often are concerned by how quickly prices settle to a new higher level following a period of declining and relatively low prices. The section also examines the expressed concern that price wars result from predatory conduct by refiners designed to drive out independents.

The Government of Saskatchewan invited the Commission to consider the reason for the often observed disparity in prices between geographic areas. This is also a matter of general public concern and is discussed in section 10.

The final topic in this chapter — price differentials among grades and types of gasoline — is addressed in section 11. The public discussion of this subject has centered on the price difference between leaded and unleaded gasoline and has been related to environmental concerns. The Commission's interest in the subject is the extent to which the observed differentials result from competitive pressures.

Gasoline pricing is highly visible and important to consumers. This, along with the wide movements in crude oil prices, and hence product prices since the early 1970s has made the public more demanding of information and explanations than with respect to other industries. For example, price comparisons between Canada and the U.S. have been the source of frequently expressed concern in the media, although comparisons for other products might reveal similar relative differences. U.S. markets tend to be larger, have more unaffiliated players, and be more vigorous than those in Canada, and this is probably reflected in the comparison of gasoline prices. Although there were occasional references during the inquiry to price differences between certain points in Canada and the U.S., systematic evidence was not presented and the pressures of the issues made it impossible for the Commission to pursue this subject.

2. Wholesale Prices

(a) Dealer Tankwagon Prices

There are two broad sets of refiners' wholesale gasoline prices. One is the prices charged to their own major-brand dealer networks, commonly referred to as "dealer tankwagon" (DTW) prices, and the other is the prices charged to independent resellers who market under their own brands.

Dealer tankwagon prices, as the name implies, are delivered prices. They are the prices paid by branded dealers for product delivered to their stations.

Each refiner divides the country into a large number of zones (one company mentioned fifty) each of which has its own DTW price. A zone covers a large area, which usually includes a number of local markets consisting of clusters of outlets that compete more directly with each other for reasons of proximity or traffic patterns.

As explained by a witness from Imperial Oil, DTW prices are intended to cover all costs and to provide the desired return on capital. In other words, as they have developed in Canada DTW prices are target or desired wholesale prices, and generally they are not adjusted downward at a time of competitively caused declining pump prices.[1] In recent years changes in DTW prices have tended to follow changes in crude oil costs or taxes and occasionally have been explained as due to an amalgam of increases in other costs.

The lack of responsiveness of DTW prices when retail prices fall means that dealers would be caught in a squeeze unless there were some means of changing the prices actually paid by them. The long-standing method used by the refiners has been to provide some form of support program which dealers may request when the retail margin available to them reaches a critical level. Table 1 below shows the average annual DTW price and self-serve and full-service pump prices of regular leaded gasoline in Greater Toronto (net of provincial road tax) reported by Statistics Canada.[2] Greater Toronto provides a useful example because it has been the scene of significant price movement. The average annual DTW price in Greater Toronto is based on data provided by several refiners and by EMR. The annual average differences between the highest and lowest DTW prices in cents per litre charged by the various petroleum companies between 1979 and 1983 respectively were: 0.5, 0.5, 0.2, 0.7 and 0.5 cents. Since margins were already tight during this period, it would be highly improbable that dealers would be able to pass on such large price differences, and support programs would have been required if those dealers facing the higher DTW prices were not to be seriously disadvantaged. One company (Texaco) was, with rare exceptions, high throughout the 1979 to 1983 period and had the highest annual average DTW price in each of the years. Shell and Gulf, with the exception of 1979, were at the low end of the range.

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[1] Although adjustments in DTW levels in response to competitive pressures have not been observed in recent years, such changes do appear in Imperial Oil's Toronto DTW prices during the National Oil Policy period of 1961 to 1973.

[2] The Statistics Canada surveys cover posted retail prices. No attempt is made to account for the value of coupons and other forms of discounting and promotional activity. Some upward bias is thereby introduced to surveyed retail prices, which varies with competitive conditions. Although the Statistics Canada samples are relatively small they appear to provide good estimates of average prices during periods when there were not extreme price movements. This conclusion is based on a comparison of the averages estimated by Statistics Canada with data provided by the petroleum companies for their company-operated outlets. The great variance over space (in a city the size of Toronto) and over time (monthly averages are reported) limits the purposes for which the estimates may be used. The Statistics Canada data have been used in this chapter because they provide wider geographical and time coverage; the possibly large errors during price wars do not affect the conclusions that are drawn from the information.

The average margin earned on self-serve sales (row 5 of Table 1) in each of the six years was well below the Commission's estimate of the average cost per litre of a "typical" self-serve outlet (excluding the cost of product). In other words, the failure to adjust the DTW price in step with market forces resulted in continuous pressure on dealer margins. The cost estimate referred to is discussed in section 5.

The DTW price is therefore only a real transaction price when dealers' margins are sufficiently high that they are not on support.

(b) Rack Prices and Other Wholesale Prices Paid by Independents

Prices paid by independents fall into two categories, namely, the rack price and prices calculated by formulae agreed to in some contracts. The term "rack price" refers to the terminal, or "rack", from which product is picked up. Most independents have a pick-up-and-delivery capability.

Table XVI-1

Average Annual Dealer Tankwagon Prices and Selected Retail Prices (Net of Provincial Road Taxes) for Regular Leaded Gasoline, Toronto, (Cents Per Litre)

	1979	1980	1981	1982	1983	1984
1) DTW price	15.4	18.3	26.4	32.3	35.7	39.8
2) full-service price	17.1	20.9	29.4	34.7	34.9	38.4
3) self-serve price	15.9	19.3	27.3	32.4	34.0	38.2
4) full-service price Minus DTW price	1.7	2.6	3.0	2.4	(0.8)	(1.4)
5) self-serve price Minus DTW price	0.5	1.0	0.9	0.1	(1.7)	(1.6)

Sources: Statistics Canada, Catalogue No. 62-010 for retail prices; DTW prices were averaged from data provided by the petroleum companies, except for 1984 which were based on quarterly industry averages provided by EMR.

Independents who buy at rack prices do so under contracts which do not set the price, but only specify the minimum and maximum quantities that the parties are obliged to buy and sell within the agreed time frame. Many independents have contracts with more than one supplier and vary the amount of their purchases from each on the basis of their suppliers' respective rack prices. Under these types of contracts either party has the right to terminate the contract if agreements on prices from time to time cannot be reached. In practice, independents often purchase less than the contractual minimum, when a supplier's price is unfavorable, without either party terminating the contract.

Rack prices for gasoline (and heating oil) are often published in the trade press. Until recently the names of the selling companies were not published. The published prices could generally be taken to be close to the prices being charged by all suppliers at the time, as was demonstrated when the Commission compared average refiners' realizations on such sales with published rack prices. A fraction of a cent per litre, however, can mean the difference between profits and losses in gasoline distribution, and firms which were above or below the published prices would tend to experience changes in their sales. Feedback to sellers from buyers through price negotiations as well as through shifting buying patterns appears to be an important characteristic of this market.

A different meaning of "rack pricing" was introduced in mid-1985 with reports that Imperial Oil and others were moving to a form of pricing under that name. Imperial Oil's new approach to pricing is discussed in Chapter XVII.

The second category of supply arrangements with independents consists of contracts in which the prices are determined according to a formula established by contract. In long-term contracts for, say, five or 10 years, the prices are related to cost changes. Crude oil is the key cost element. Other cost elements such as labor or, more broadly, processing costs, are either treated separately or are rolled into the cost formula as a percentage of the changes in the cost of crude oil. Some of the largest marketers, such as Turbo before it built its refinery, Mohawk, and Canadian Tire have entered into contracts in which the price was tied to cost formulae. These contracts tend to give the supplier exclusive supply rights. Processing agreements are a form of cost-based supply agreement, with the principal difference being that the buyer is sometimes responsible for selling the full barrel under a processing agreement. In such cases, the buyer may negotiate the sale of unwanted products to the refiner as part of the overall supply agreement.

Rack prices are spot prices and react to short-run forces on both the demand and supply sides of the market. Long-term cost-based contracts are, by definition, not responsive to short-run market forces unless those forces relate to cost changes included in the escalator clauses. The position of these buyers is much closer to that of refiners,[3] in that a decline in retail prices compresses available margins. Rack buyers, on the other hand, are in a position to try to overcome the lower margins by striving for lower wholesale prices.

Another type of price determination formula, found in supply contracts of shorter duration (e.g., one year), ties the supply price, in the form of a discount or other difference, to the DTW or other prices.

A third category of supply arrangement consists of private-brand agency agreements. These are discussed following the description of margin-support programs, since they have similarities to certain programs.

3. Refiners' Margin Support of Dealers and Independents

(a) Support to Branded Dealers

Wholesale prices below the DTW or other listed wholesale price may be referred to as "supported prices". The central questions regarding support programs in this inquiry turn on the conditions under which support is granted. It is therefore necessary to understand the mechanisms used. A knowledge of support programs is also necessary to appreciate the effect of changing retail prices on dealers' margins discussed in a subsequent section.

It is important to remember that the need for support is caused by downward rigidity of listed wholesale prices. The DTW is a more or less arbitrary price, which gives refiners a good deal of control over the extent to which their dealers are on support at any given time.

Support to major-brand dealers has been intermittently provided for more than two decades. Support programs are associated with low retail margins. These occur during price wars, but may also persist over long periods. As

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[3] There is also an important difference between them. Refiners' per-unit costs decline until refineries are close to capacity, whereas buyers under cost-based contracts face a flat cost curve. Where there is excess refining capacity refiners are under more cost-induced pressure to increase volume than the resellers are.

Table 2 shows, large percentages of Gulf's volume (which may be taken as reasonably representative of the industry) were sold through branded dealers on support through much of the period 1973-81. Since then the percentages for all refiners have been well in excess of 80 per cent of branded retail motor fuel volume in Ontario and have been correspondingly high in many other parts of the country, to the extent that pump prices set in the context of support programs have predominated for more than a decade.

Although there are a number of differences in the details of the support programs offered by the various companies, they are the same in broad outline. The refiners make known to their dealers the program they offer, of which the key feature is the retail margin or the range of retail margins available to the dealers. Support programs are triggered at the initiative of the dealers. This will occur when the retail margin (the difference between the retail price and the DTW price) falls below the margin (or margins) provided under a support program.

The existence and amount of support may be determined by comparing whether and by how much the DTW price exceeds the actual net price

Table XVI-2

Gulf Canada Limited
Support to Branded Dealers
1973 – 1981*

Region	1973	1974	1975	1976	1977	1978	1979	1980	1981
Central									
%-Outlets	55.0	33.6	53.0	62.8	75.1	90.4	74.0	67.1	45.3
%-Volume	51.4	43.6	70.9	83.3	93.4	93.4	88.3	35.2	50.6
Eastern									
%-Outlets	67.9	42.9	36.5	50.0	64.2	68.2	86.8	19.7	17.4
%-Volume	51.6	43.4	54.4	64.8	74.7	77.9	55.6	9.1	11.4
Western									
%-Outlets	7.2	12.4	25.4	54.6	48.2	81.8	71.5	73.9	62.9
%-Volume	41.4	14.1	37.1	70.4	84.1	89.6	81.3	74.1	77.8

* Gulf's data are shown because they provided the most complete series on the percentage of volume and outlets covered under a support program.

Source: (Gulf) Exhibit M-349, p. 5.

charged to the dealers. In May 1984, in most localities, the majors were offering maximum support of approximately 3¢/l for full-service outlets. The average retail margin that dealers earned or would have earned in the absence of support (retail price less DTW price) was 4.2¢/l in Halifax, 3.3¢/l in Saint John, and 2.6¢/l in Winnipeg. There was no need for the dealers to request support in Halifax since the retail margin was greater than the amount allowed under a support program. In Saint John the dealers' margin would have been negative without support — i.e., the average DTW price was 3.3¢/l more than the average retail price.[4] Therefore, the average level of support in Saint John was the amount by which the DTW price exceeded the retail price 3.3¢/l plus the retail margin allowed under support 3.0¢/l: a total of 6.3¢/l. In Winnipeg, the average retail margin of 2.6¢/l fell short of the supported margin of 3.0¢/l, and dealers would have had an incentive to ask for support. This would have reduced their suppliers' realizations to 0.4¢/l below the DTW price.

Support programs differ in terms of whether the dealer or the refiner has the authority actually to set the pump price and how the burden of lower prices is shared between the dealer and the refiner. "Lower" is defined relative to a benchmark price adopted by the refiner and adjusted from time to time. The benchmark is generally the prevailing pump price in the dealer's trading area at similar outlets (e.g., major brand full-service outlets).

Another distinction is between support programs under which the refiner assumes ownership of the dealer's inventory and those under which the dealer retains ownership. In the first case the dealer becomes an agent and sells on consignment at pump prices set by the refiner, receiving a commission from the refiner. According to some refiners, consignment permits them to avoid potential problems under the price discrimination section of the Combines Investigation Act. Lower net prices to some dealers than to others in the same trading area under an allowance-type support program could lead to complaints that one competing firm was receiving more favorable prices than another. Under consignment there is no sale between supplier and dealer, hence there is no "price". Also, where the supplier exercises his power under consignment to determine the pump price, the dealer has no pricing policy of his own to which the price maintenance prohibitions of section 38 can apply. Since 1976 the Combines Investigation Act has contained a special provision permitting the review and prohibition of consignment selling practices in specific cases:

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[4] There is no way of knowing, however, what the DTW price or retail margin would have been without support since it is highly doubtful that dealers would have sold at a negative margin.

> 31.3 Where, on application by the Director, and after affording the supplier against whom an order is sought a reasonable opportunity to be heard, the Commission finds that the practice of consignment selling has been introduced by a supplier of a product who ordinarily sells the product for resale, for the purpose of
>
> > (a) controlling the price at which a dealer in the product supplies the product, or
> >
> > (b) discriminating between consignees or between dealers to whom he sells the product for resale and consignees,
>
> the Commission may order the supplier to cease to carry on the practice of consignment selling of the product.

The evidence received in this inquiry was introduced and is being considered under section 47, not as part of a case under section 31.3. Consignment practices, along with other forms of support and other practices and situations, are being evaluated in terms of the broad standard of the public interest as discussed in Chapter I.

The Director has argued that the refiners' principal motive for using consignment selling has been to achieve a price maintenance result. This charge has been denied by refiners who argue that the principal purpose and effect of support programs of whatever type is to allow them to lower their wholesale prices as may be required by local market conditions.

The principal support programs used by the majors are described below. The companies have changed their programs from time to time and although the evidence relates to recent time periods, it may not describe current practices. Imperial Oil, in particular, has stated that it is abandoning its dealer support programs under its policy of "rack pricing" introduced in the late summer and early fall of 1985. This policy is discussed in Chapter XVII.

Under consignment support programs used in recent years by Gulf and Imperial Oil, the dealer is provided with a fixed commission. Gulf and Imperial Oil set the retail price by instructing dealers as to the prices they should post. As long as the dealer is on support, changes in retail prices affect only the profit margins of the supplier, not the dealer's commission. Shell used the same approach until 1980. It then adopted a program under which it set a maximum price, with the dealer free to set lower prices which correspondingly reduced the dealer's commission. Petro-Canada inherited a similar program from BP.

Texaco does not use consignment as a support tool. It uses consignment as a long-term arrangement for company-owned outlets operated by agents (as do the other integrated companies), and as a means of financing inventory for dealers who are considered to be poor credit risks. For support it uses allowances which it describes as "temporary". An allowance-based support program offers a guaranteed allowance to the dealer when his pump price is below a specified level. As the pump price falls the cost of the reductions below the specified level is divided between the dealer and Texaco until the dealer's margin falls to a guaranteed minimum; thereafter all further declines in price are borne by Texaco.

Suncor, like Texaco, relies on allowances, which it describes as "competitive" allowances. It uses consignment at only a handful of self-serve outlets. The structure of Suncor's program is the same as Texaco's. Under its allowance program it provides a reduction from the DTW price when the dealer's margin falls below a specified level (3.3¢/l in May 1983). Further reductions in street price are shared by Suncor (60 per cent) and the dealer (40 per cent) until a minimum margin (2.8¢/l) is reached which is guaranteed to the dealer; all further reductions in prices are borne by Suncor. (Texaco's minimum margin at that time was 2.6¢/l.)

The foregoing description applies to a situation in which the Suncor (and Texaco) dealers' prices are moving in step with market prices. Although Suncor and Texaco stated that their dealers are free to set their own prices, it is not clear how dealer-initiated price reductions are incorporated into their programs, particularly once prices reach a level where a minimum guaranteed margin applies. Dealers would then have an incentive to reduce their prices in order to increase their volumes. It is difficult to see how the existence of such an incentive, along with pricing responses from competing dealers, could fail to result in continuous downward pressure on retail prices.

The consignment program used by Imperial Oil before 1982 had a similar structure to Suncor's and Texaco's allowances in that the impact of declining street prices on margins was shared until a minimum margin was reached. Imperial Oil, however, set the prices directly.

In some areas, Imperial Oil and Petro-Canada support their dealers through allowances rather than consignment. Imperial stated that it preferred to use consignment as it is much easier administratively. Nevertheless, it had adopted allowance-based systems in British Columbia, Nova Scotia and Quebec for reasons particular to each province. The British Columbia Government in 1976 requested the oil companies not to use consignment programs. The avoidance of consignment in Nova Scotia is tied to provincial government regulation of wholesale prices and other aspects of gasoline retailing. Imperial adopted allowances as a method of support in Quebec as a result of a strike by its dealers in October 1982 in opposition to consignment.

Imperial Oil's allowances work in the following way. In response to a request for support, Imperial determines the predominant or most common price in the dealer's market area and the amount of support necessary at that price to bring the dealer up to the operating margin level guaranteed at the time. Dealers are free to price up to 0.5¢/l above the predominant price on the understanding that the amount of support provided by Imperial Oil falls by 60 per cent of the amount by which the dealer's price exceeds the predominant price. Support ends if the dealer's price goes more than 0.5¢/l above the predominant price. Dealers are also free to price below the predominant price. Support then increases by 60 per cent of the amount that the dealer's price is below the predominant price up to a maximum support level which is reached when the dealer's price is 0.5¢/l below the predominant price. Further price reductions beyond that point are fully reflected in lower dealer margins.[5] The method used to determine the allowance is the same in the three provinces, but the amounts and the percentages differ.

Petro-Canada's initial approach to support allowances was inherited from Petrofina and Pacific Petroleums. Petro-Canada monitors pump prices and determines what it considers to be the prevailing price. The dealer receives the maximum support level when he charges the prevailing price. Under support, the dealer takes delivery of the product at the prevailing retail price less the support allowance. If the dealer chooses to price below the prevailing price, his margin falls by the amount of the difference between the two.

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[5] The following example from the evidence illustrates the operation of the support program in a section of Montreal. The predominant price was 52.0¢/l, the DTW price was 49.9¢/l, and the resulting dealer margin without support was 2.1¢/l. Imperial provided a support allowance of 0.3¢/l, bringing the dealer's margin to 2.4¢/l at the predominant price. The allowances and dealer's margins at various hypothetical prices are illustrated below.

Dealer's Hypothetical Price	Competitive Allowance (Cents Per Litre)	Dealer's Margin
50.50	0.60	1.20
51.50	0.60	2.20
51.90	0.36	2.36
52.00	0.30	2.40
52.10	0.24	2.44
52.50	0.00	2.60

(b) Support to Independents

In response to requests from independents during periods of particularly low retail prices in 1982 and 1983, refiners offered or negotiated support. Prior to this time Gulf and Imperial Oil, and perhaps other refiners, had on occasion provided support after being approached by their independent customers. Imperial Oil stated that this earlier support had taken the form of reductions in the rack price for a period of time. Since the amount of support and the conditions under which it was granted in 1982 and 1983 were often the subject of negotiation, the details of the arrangements entered into are not as clearly spelled out in the evidence as are the dealer support programs. There are, however, several prominent features.

The level of support offered to independents was lower than that provided to dealers. For example, although Petro-Canada's support to independents was 2.6¢/l in 1983, and 2.4¢ and 2.8¢ to its self-serve and full-service dealer outlets, independents bore transportation costs that Petro-Canada's dealers did not. Some of the refiners stated that independents normally had a large margin and could, therefore, afford to bear some of the costs of reduced margins during price wars. The level of gross margins available to independent resellers is discussed in a later section.

Support to independents was granted as a result of individual negotiations. Unlike support to dealers, both the fact and the amount of support to independents were at the refiners' pleasure in each case. Also, negotiations frequently took place after the gasoline had been sold by the independent.

Another characteristic of support to independents is that in no instance did the refiners assume control over the independents' pricing. It is, nevertheless, questionable whether independents felt themselves free to follow any pricing strategy they might choose. They would understandably feel constrained from engaging in aggressive price behavior which could lead prices down, given the fact that support was granted at the refiners' pleasure.

Texaco and Imperial Oil provided support to independents on a chain-wide basis rather than outlet by outlet. The rationale for this approach which for some reason was not felt to be equally applicable to their own networks, was that independents with a large number of outlets are able to spread losses when low prices affect only a few outlets.

The Director argues that the use of support as a method of price adjustment resulted in refiners being better able to raise prices by discontinuing support. The refiners argue that support is ended after prices are restored because it is no longer necessary, and that support is just a way of adjusting the wholesale price which the refiner sets in any event.

Discussion of the policy questions raised by the support programs to dealers and independents follows.

(c) The Director's Position

In his closing statement the Director argued that support programs to branded dealers and independent resellers, along with other more long-lasting vertical arrangements such as private-brand and major-brand agency agreements and management contracts, have extended the refiners' influence over pump prices, an influence already considerable as a result of numerous refiner-operated retail outlets. Support programs are stated by the Director to be an effective means for refiners to restore prices quickly after a period of falling prices. Cited as an example is the large overnight rise in prices in Quebec and Ontario in May 1983 following a period of severe price competition. Support programs were also argued to be a means of subsidizing inefficient outlets. This argument, made particularly with respect to earlier years, is said to still hold. Related to this argument is the allegation that refiners used their ability to control local prices in order to engage in predatory pricing against independents.

The question about the degree of efficiency of the majors' retail networks, discussed earlier, is primarily one of the speed with which they adjusted to changing consumer preferences. The majors have argued that they could not be expected to abandon their dealers and their market position, and that they were simply trying to hold their own by no more than *meeting* prices rather than by trying to put independents out of business. The Director's view is that the adjustment in the majors' networks should have been faster, and would have been so without support programs.

The Director has recommended that:

> Suppliers of motor fuels and affiliates be prohibited from obtaining direct or indirect control over retail prices of motor fuels at any marketing outlets other than outlets that the supplier owns and operates directly.
>
> All suppliers of retail outlets, both refiners and non-refiners, would be prevented from entering into agency agreements, consignment arrangements, management contracts, or offering temporary allowances or other price support to retailers, *where the amount of support is in any way tied to pump prices.*

(d) The Refiners' Rationale for Support Programs

The oil companies argue that support programs were introduced to support their dealers; that support was necessary in order to permit their dealers to compete against reseller chains who set prices centrally for each outlet. They argue that support was necessary to keep their dealers in business and to protect the market share of the refiner. In effect, this amounts to saying that refiners found it necessary to be vertically integrated with respect to retail pricing. Imperial Oil stated that its move to employee- and agent-operated outlets was an attempt to deal with its lack of control over retail prices.

Although support programs may have initially been introduced to compete against independents, Gulf argues that they are a general competitive tool used by each refiner against all competitors.

Changes in DTW prices are seen by the refiners as a less effective competitive response than support programs because DTW prices cover a much wider area than the local market or markets to which the petroleum company may be forced by competition to respond within a DTW zone. Thus, if a company were forced to reduce its DTW price in order to respond to competition in one or more local market situations within a DTW zone it would be more costly than necessary, with many dealers receiving the benefit of lower DTW prices that they did not need. Additionally, dealers and refiners may have different views on the trade-off between profit margins and volume. The petroleum companies expressed the view that reductions in DTW prices would, in many cases, not be passed on by dealers. Thus the companies would not gain the benefit of higher volumes for their refineries and in their networks as a result of lower DTW prices. Shell experimented in 1977 with a reduction in DTW price in Sudbury and said that it found this to be the case.

The petroleum companies argue that the objective of support is not to control retail prices, but rather to tailor wholesale prices to local market situations. Shell argues that the fact that it changed in 1980 from a policy of setting the retail prices under its consignment program to one where it set the maximum price and dealer margin demonstrates that support is not intended to control retail prices.

Whether or not the objective or effect of support programs is to control retail price, it should be noted that there are other solutions to the problems of the oil companies. First, the DTW price zones were established by the refiners themselves. If the zones are too large to allow responses to local market situations, the zones can be changed. Imperial Oil, in its recently introduced "rack pricing" policy, has considerably increased the number of wholesale pricing zones, although the number in question is probably still well below that necessary for there to be a one-to-one correspondence with approximate retail markets. Imperial Oil has stated that DTW price zones were intended roughly to reflect delivery costs. There is, nevertheless, nothing to prevent the establishment of sub-zones which would all have the same wholesale price during "normal" times and different prices in response to local pricing situations.

Additionally, the petroleum companies are free to set maximum resale prices to ensure that reductions in wholesale prices are passed on. The Combines Investigation Act does not prohibit suppliers from setting maximum resale prices.

(e) The Commission's Observations

As stated earlier, the Director has objected to support programs on the grounds that they allow the maintenance of inefficient outlets, they permit the majors to engage in predatory pricing against independent outlets, and they increase the majors' control over retail prices. The Commission regards this last concern as the most significant. There were and are other means of supporting inefficient outlets or of engaging in predatory pricing. More importantly, predatory pricing is objectionable on its own and is dealt with separately below.

There are two respects in which support programs allow refiners to control retail prices and margins. The first relates to the refiners' ability to set *maximum* retail prices and margins. All support programs leave this power with refiners, which possibly aided refiners in the restructuring of their networks towards self-serve. Whether or not this was the case, this type of control is not anti-competitive. The probable rationale for section 38 of the Combines Investigation Act not prohibiting suppliers from setting maximum retail prices is to allow suppliers to protect their competitive positions by ensuring that their products are not over-priced in relation to those of competing suppliers. In general, each supplier also has an incentive to ensure that distributors' margins are sufficient to permit them to survive and to have an incentive to carry the supplier's products. Nevertheless, to the extent that dealers differ with respect to their market circumstances and their approaches to marketing their goods and services, the fixing of uniform support margins by refiners for broad regions (e.g., Quebec, British Columbia) interferes with consumer choice and with the ability of dealers to survive by offering high levels of service or by charging higher prices than are allowed under support programs. Even though refiners generally allowed a higher support margin to full-service outlets than to self-serve outlets, the differential may or may not have allowed for the full difference in costs. It is difficult to see how the differentials that consumers are willing to pay for differing degrees of convenience, levels of service and so on can become established when prices, and therefore pricing differentials, are centrally administered as they turn out to be when dealers are on support. Moreover, widespread and large numbers of company-operated outlets allow individual refiners to safeguard their market positions by ensuring that the retail margins earned on their brands do not become too high.

If there is a competition policy objection to support programs, it is that they may permit refiners to charge higher retail and wholesale prices than they otherwise could. To the extent that pricing decisions are transferred under support from hundreds of dealers to a small number of refiners, there can probably be a closer meeting of minds on price levels than would otherwise occur. This concern is heightened because the relationship between refiners and their dealers is one of competitors as well as of suppliers and customers. There already is a widespread presence of refiners in retail distribution through company-operated outlets. It is not a healthy competitive situation for a small number of firms to have such an extensive degree of influence over the prices of large numbers of firms who are their competitors. Before pursuing this line of reasoning, however, it is necessary to consider whether, and exactly how, the types of support programs described earlier transfer control of dealers' prices to refiners. Additionally, it is necessary to ask whether a small number of refiners are, in fact, likely to push prices higher than would numerous branded dealers, who, as noted earlier, very often want higher prices and margins than are possible under support programs.

Some consignment programs do give the supplying refiner control over retail prices and are objectionable on that score. Any doubt or ambiguity about the dealers' authority over their prices is also a cause for concern, particularly in the light of other characteristics of support programs.

Shell's consignment program and Petro-Canada's consignment and allowance programs allow the companies to set only *maximum* prices and margins. Shell argues that this type of program simply has the same effect as changes in wholesale prices, since the dealers are free to change retail prices in a downward direction. This is correct and there can be no objection regarding refiners' limitations on their dealers' prices under these programs. Although Imperial's allowance program cannot be briefly summarized, it too gives its dealers authority over their prices. The objections to these programs, as discussed below, are that support can be withdrawn at the initiative of the refiner and that support levels are tied to predominant prices.

The practical extent of a dealer's independence to set his own prices is, however, severely restricted when support is offered as a privilege rather than as a matter of right. Support is then something different from a change in wholesale prices. There is no evidence that dealers have been threatened by refiners, but the imposing discrepancy in economic power between refiners and their dealers would tend to make dealers hesitate before reducing their prices when they know that falling prices are expensive to refiners and that support can, for whatever reason, be withdrawn.

The most important objectionable feature of support programs is addressed by the Director's recommendation that support or changes in wholesale prices should not be "tied" to retail prices. "Predominant prices" create a target price. When prices are changed the refiners identify the "predominant price" and thereby set the new price at which their dealers can earn the maximum margin or commission. Therefore, in spite of the fact that not all refiners set their dealers' prices under support, tying support levels to retail prices allows common prices as desired by refiners to become more quickly established than would occur if refiners simply stated wholesale prices. Quantum jumps in wholesale and retail prices would probably still occur if the Director's proposal were adopted. Price wars end when one participant raises prices and other firms follow. In the absence of support programs tied to retail prices, refiners would change prices at company-operated outlets and wholesale prices. Dealers would be forced to increase their prices in response to higher wholesale prices, and retail prices would sharply increase to end a price war as they do now. The principal difference would be that dealers would not be told what the new "predominant" prices were or what differential between full-service and self-serve outlets was appropriate.

(f) Possible Objections to Ending Current Support Programs

Support programs may be regarded by some as necessary for the survival of major-brand dealers. Whether or not there are support programs, however, refiners have an incentive to adjust their wholesale prices when retail prices fall and compress their dealers' margins below a certain level, and thereby to maintain their dealer networks. While no firm or group of firms has or should have protection against declining margins, the majors' dealers (and other customer/competitors) are provided a measure of protection as well as being made vulnerable by the majors' dual distribution. As competitors of their dealers the majors have an obligation to ensure that their dealers' margins are at least roughly comparable to the majors' own retail costs. This obligation, it should be stressed, does not guarantee the dealers a "reasonable return on their efforts and capital" or some such regulatory concept. Nevertheless, as indicated by the Commission's discussion of the gross margins of the independent marketers below, economic efficiency and protection of the dealers against a predatory price squeeze require that the majors' net returns from retail sales through company-operated outlets be no less than the net return from their wholesale sales to dealers. The most relevant costs for measuring net returns will vary with market conditions. Even though the cost standard is necessarily variable and its application within the majors' organizations may prove imperfect, adoption of the general principle by the majors should protect the dealers against the disastrous consequences of price wars when fast-moving events would make them most vulnerable. The situation is the same when the majors set support levels since the margin allowed the dealers ought not be below the majors' own cost levels. This matter is pursued further in sections 5 and 6 of this chapter.

To the extent that refiners use support programs to gain increased control over pump prices, strict limits on the form of such programs could lead them to seek more direct and complete control by directly operating outlets. This is not a sufficient reason, however, for failing to restrict forms of vertical control that are considered to be against the public interest. Gasoline can be sold in a specialized outlet or it can be cross-merchandised with many other products. Refiners appear to do well in the direct operation of some types of outlets, but may not in others. As long as refiners are required to earn as high a net return on sales through the outlets they operate as on wholesale sales to customer/competitors, increased vertical integration by refiners should not be regarded a problem.

It might be argued that since many dealers prefer to operate on high margins, it should not be supposed that increased refiner control of retail prices leads to higher rather than to lower prices. The Commission does not accept that all dealers choose to operate high-markup, low-volume outlets. This may be an optimal strategy at some outlets, but not at others. Where increased traffic due to low gasoline prices results in increased sales of gasoline or other products (e.g., those sold in a convenience store), it could be more profitable to sell gasoline at low markup. Moreover, the widespread presence in the marketplace of independent and refiner-operated outlets means that dealers are only in a position to charge differentials if a significant number of consumers are willing to pay them.

It might also be objected that the concern over a small number of refiners gaining a greater degree of control over retail prices is not warranted because support is provided when prices are "low". Judgements on whether prices are high" or "low" depend, however, on the eye of the beholder. Furthermore, as is clear from the statistics of the volume of sales receiving support, most pump prices for long periods and over wide areas have been set under conditions of support.

(g) Conclusion

Support programs in which pricing authority is assumed by refiners entail the greatest risk to competition. Some support programs avoid this feature, but suffer from the defect that support is provided as a privilege and can be withdrawn by the refiner. Moreover, all programs under which the refiner does not set prices require that a predominant or market price to which support levels are anchored be established. The widespread direct participation of refiners in gasoline retailing makes these features of support programs particularly unacceptable. In the Commission's view support programs that relate the amount of support to particular retail prices (as is the case with all margin support programs referred to in the evidence), and that are widespread in the industry, are contrary to the public interest.

(h) Support to Independent Resellers

Commission concerns about the use of support rather than, say, temporary changes in rack prices as a means of readjusting wholesale prices to independent resellers in response to changes in retail prices are similar to those regarding support programs to dealers. First, support is granted at pleasure, and this will tend to have an inhibiting effect on the pricing freedom of the recipients of support. The second concern in the case of support to dealers, namely, that support is tied to specific prices which could tend to help establish a new common price level when prices are increased, does not appear to apply to resellers. Support to resellers is separately negotiated in each individual case; there is no evidence that support to resellers is tied to specific prices. However, if resellers feel constrained from trying to change differentials in their favor, this means that support, as a practical matter, becomes tied to resellers' prices, with the risk that resellers will tend to become passive price followers.

4. Suppliers' Control of, or Participation in, Setting Retail Prices Through Other Supply Arrangements

(a) Sunys and Other Agency Arrangements Unrelated to Support Programs

Several kinds of agency agreements are unrelated to support programs. As mentioned earlier, the majors (and some independents) use agents rather than employees to operate many of their outlets. Another type is an agency arrangement with a branded dealer. A large number of agencies exist in rural areas and in smaller towns; many of them deliver heating oil (in Eastern

Canada), diesel and gasoline to the farm trade. The suppliers set the retail prices and provide a per-unit commission.

Branded-dealer agency agreements have been entered into in recent years with gasoline and diesel dealers who would ordinarily buy their supplies. These outlets sometimes receive a fixed commission, in which case the supplier sets the price, or a variable rate commission which is usually accompanied by shared price-setting authority. Variable rate commissions are discussed below in relation to private-brand agency agreements. The specific branded-dealer agency agreements in evidence cover five outlets operated by Fifth Wheel Truck Stops in Ontario, an agreement covering two high-volume outlets in Ste-Rosalie, Quebec and a number of 7-Eleven convenience store outlets in provinces west of Quebec. The Fifth Wheel and Ste-Rosalie agreements are with Imperial Oil. Prior to 1983 the agreements called for a variable rate per-unit commission that depended on the price. In an amended agreement with Fifth Wheel entered into in 1983 a fixed per-unit commission was set and Imperial Oil assumed pricing authority. Most of the national majors have branded-agency agreements with 7-Eleven; some are fixed per-unit commissions and others are variable. Long-term supply agreements were obtained by the refiners when Southland Canada, Inc., the corporate owner of 7-Eleven, took over their former gasoline outlets.

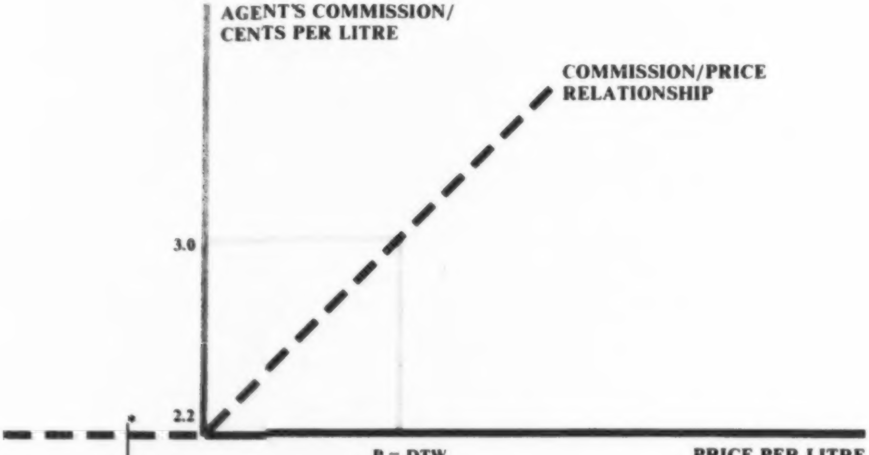
Imperial Oil is the supplier in all of the *private-brand agency agreements* in evidence. The first such agreement entered into by Imperial Oil was with Sunys in 1977. Mr. Jack Robillard had started the Sunys chain of outlets in 1968. After enjoying some growth and financial success he sold the company in 1972. Following a period of less favorable results the company (or part of it) was resold to Mr. Robillard and others in 1977, who purchased the business in conjunction with entering a new type of supply arrangement with Imperial Oil. Sunys' successive supply agreements with Imperial commencing in 1977 were the focus of concern of a number of independents and were an important part of the evidence on gasoline distribution.

Mr. Robillard testified that before he re-entered gasoline retailing in 1977 he had decided that he wanted secure supply and downside price protection during periods of low prices. This was achieved through a five-year exclusive supply agreement with Imperial Oil, which made Sunys an agent of Imperial Oil for the sale of motor fuels. Mr. Robillard had originally sought an arrangement under which he would operate a chain of Esso-branded outlets, but that proposition was turned down by Imperial Oil.

Although the original agreement was for five years, there were a number of revisions of the contract respecting the commission formula. In 1982 the following commission structure was in effect. It was similar to those found in the other private-brand agency agreements entered into by Imperial Oil.

A "base commission" rate was tied to a "base price", which was equal to Imperial Oil's DTW price (or an average of its competitors' DTW prices). When the agent's price was equal to or greater than the DTW price he received a commission equal to his base commission plus the difference between his price and the DTW price. When his price fell below the DTW price his commission fell until it reached a minimum level which was earned regardless of how low the price went. The value of the commission is illustrated in Figure 2 below for the case where the base commission is 3.0¢/l and the minimum commission is 2.2¢/l. The Figure is constructed on the assumption that the agent's commission goes up by the full amount of any difference between the agent's price and the DTW price. When this difference is negative the commission falls by the full amount of the difference until a minimum commission rate is reached, which in Figure-2 is when the agent's price is 0.8¢/l below the DTW price. Based on the written agreements, the agents had the authority to set the price until it reached a "predatory danger level", which in the early 1980s was considered by Imperial Oil to occur when the agent's price went to 1.1¢/l below the DTW price. At prices below this level, which was reached during several price wars, the agent was expected to consult Imperial Oil on price reductions.

FIGURE XVI-2.
Private-Brand Agents' Commission Structure



DTW: Dealer tankwagon
* Predatory danger level

Several of the contracts contained pricing guidelines specifying that the private-brand agent's retail price was to be competitive with those of like offerings and below the majors' prices. Since many independents operated full-service outlets, and the Sunys outlets were self-serve, the offerings of important competitors were not exactly comparable in many markets. Sunys sought to price somewhat below these offerings, which was a price advantage that the independents were not always willing to grant. Also, the majors were not always prepared to allow Sunys a differential, or not one as large as Mr. Robillard would have liked. As discussed in the section on price wars, disagreement on what is an "appropriate" differential between different outlets can readily become the source of successive price cutting.

The relationship between Imperial and Sunys appears to have been fairly stormy. Although Mr. Robillard used his relationship with Imperial in an aggressive manner to raise Sunys' market share and earnings, Sunys was also frequently used by Imperial Oil in market experiments designed to raise prices. On these occasions, which occurred during periods of low or falling prices, Sunys would be asked to take the lead in raising prices, to see whether other firms would follow.

Price-setting responsibilities underwent a major change in a contract entered into in May 1983, when for a time Imperial Oil assumed full authority. In return, Sunys received a monthly income that was largely independent of sales. The differentials on which Sunys had insisted with respect to the prices at major brand outlets and full-service independents' outlets were no longer a factor in Sunys prices.

The May 1983 agreement with Sunys occurred just before the May 20th price recovery from a particularly severe price war. The Director argues that the new agreement with Sunys made the price recovery possible. As price information from a number of local market areas shows, however, the price recovery was far from uniform, and in many areas did not last. Sunys was, of course, only one, albeit important, factor at the retail level in a complex of market forces that included significant excess refinery capacity.

Under an amended agreement with Cango Petroleums, a large private-brand agent in southern Ontario, Imperial Oil also assumed authority over pricing at the relevant outlets for several months starting in early June 1983.

In November 1983 Sunys was acquired by Cencan Petroleum and the operations of the two companies were combined under the name of Sunys Petroleum Inc. The acquisition by Cencan was made partly on the strength of financing from Imperial Oil. A new motor fuels agency agreement was entered into, that provided as follows with respect to pump pricing authority:

"Sunys shall sell the Motor Fuels at such price or prices as Esso shall from time to time stipulate, and Esso hereby agrees that such prices shall not for an unreasonable length of time exceed any major brand prices in competition with the particular Premises." The agreement was subsequently amended to return full pricing authority to Sunys.

As part of Imperial Oil's move in 1985 to its "rack pricing" system all long-term agreements with price or margin formulas will be phased out or ended on the agreement of the parties.

(b) Management Contracts

Suncor appears to have been the only refiner to have entered into this type of supply arrangement. Suncor has virtually complete control of the retail price under the contracts in evidence, subject to the existing contractual rights of dealers. These arrangements may conveniently be viewed as temporary acquisitions, with the important difference being that the assets are placed under the *management* of the supplier, not under its complete authority as would be the case in an acquisition.

(c) The Policy Issues

The Director has objected to these agency agreements and management contracts on the grounds that they widen the already extensive participation of refiners in retail pricing and thereby increase their collective control over retail (and wholesale) prices. He has recommended that they all be prohibited. He has made the same recommendation with respect to refiners' acquisitions of independents that raise similar issues.

While the broad question of refiner control over pricing is raised by each of the arrangements discussed in this section, it is important to recognize that the rationale and the overall effects of the different arrangements may vary. Therefore, the Commission does not believe that it is necessary or desirable to have a blanket rule that does not allow for particular circumstances. For example, no one could reasonably argue that Suncor's arrangements with Golden Triangle Oils Limited (GTO) has, by itself, a substantial effect on competition. Also, it may be perfectly reasonable given the respective position of the parties. The same would probably be true if Suncor had acquired GTO rather than entered into a management contract with it. One might very well conclude, however, that Imperial Oil's arrangement with Sunys or other firms with which it has (or had) private-brand agency agreements did have a substantial effect on competition. Thus, while the Director is understandably concerned about the collective effects of all the vertical arrangements referred to, the Commission considers that a more selective review of the arrangements or types of arrangements would be sufficient.

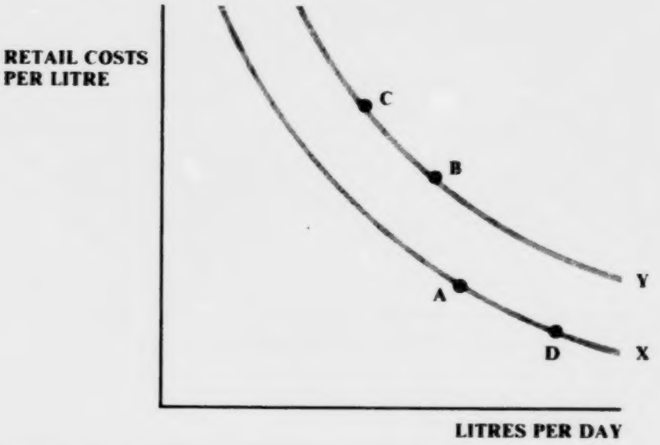
Agency operations at company-owned outlets are different. While these types of operations merge into others that may raise serious questions (e.g. those with 7-Eleven), they do not contain a critical ingredient — they are not supply arrangements under which refiners obtain control over a customer/competitor's pricing. In the Commission's view, refiners' direct participation in retailing can, overall, make a positive contribution to competition, and agency arrangements often appear to be an effective form of participation for the refiners. Therefore, in the light of the evidence to date and of the Commission's recommendations in other areas, it believes that continued refiner participation in retailing through agents or employees at company-owned outlets is not contrary to the public interest.

5. The Costs of Retail Gasoline Distribution: Calculations and Implications for the Evidence of Alleged Predation

(a) The Structure of Retail Costs

Most cost elements in retail gasoline distribution, apart from the cost of acquiring the gasoline, are fixed across a wide range of sales. As a result, average total costs are highly sensitive to the volume of sales, which is typical in many areas of retail distribution. This means that total or average costs are best described by a curve or series of points (as shown in Figure 3) rather than by a single value. One of the practical implications of declining average total costs as volume increases is that one of the principal strategic questions for a retailer is where to draw the balance between higher markups and lower volumes. This characteristic of the cost curve, along with the high degree of substitutability among different brands of gasoline, explains why prices tend to be the same for brands which are accepted by the consumer as close substitutes. It also explains why attempts to widen or narrow price differentials between types of outlets can result in price wars; not only do the disadvantaged outlets suffer from reduced profits on lost sales, but the profit margin on remaining sales also shrinks as the retailer is forced up his cost curve by declining sales, as illustrated in Figure 3. In this example, it is assumed that firm X, the lower-cost firm, is initially at point A, and firm Y, one of the higher-cost firms, is at point B. If firm X reduces its price without a response from the other firms, it will be able to move to point D, and the other firms, as represented by Y, will end up with unit costs of distribution (excluding gasoline) at C. This illustrates why an attempt by firm X to widen the price differential, increase its market share, and reduce its unit costs will be resisted by its competitors. Much the same situation would hold if firms had the same level of costs, with the difference being that attempts to widen the differential would and could be resisted more fiercely.

FIGURE XVI-3.
Short-Run Average Total Cost of Retail Distribution



Some of the allegations of predation or disciplinary conduct on the part of the majors towards independents, as made by the Director, implicitly involved situations where the independent marketers would have moved down their cost curves, and the majors' outlets would have been forced up their own curves if they had not responded by lowering their prices. Evidence from a more recent period was presented by Mr. W.A. Hemstreet, owner of the "Robo" brand, who recounted his experiences in Kitchener. His evidence did not show predation. Its essence was that all his attempts to reduce his prices and, in effect, to spread his fixed costs across larger volumes foundered because his price reductions were always met, sometimes excessively in his opinion. The Commission is hard pressed to see how Mr. Hemstreet or anyone else could expect a different result, when his attempts to increase differentials would have had such immediate, negative effects on his competitors. It is difficult to find predatory intent or effect in firms meeting their competitors' price reductions, even if the competing firms are operating on a higher cost curve.[6]

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[6] There was no evidence of the costs of Mr. Hemstreet's competitors.

(b) Per-Unit Costs at Self-Serve Outlets

While resistance to attempts to widen price differentials by competitors of whatever description can generally be expected in gasoline retailing, well-functioning albeit concentrated markets should lead to the replacement of higher-cost outlets by lower-cost outlets. This can happen in various ways. One way is through price cutting that results in prices being forced down towards the cost level of the more efficient firms. This route is least likely to result in excess capacity. Lower-cost firms may also gradually expand their share of the market, because they are likely to be more profitable and to have a greater incentive to expand. Integrated refiners play a key role in this process. By expanding sales to those parts of the retail trade that offer the highest net returns, individual refiners are in a position to encourage the expansion of either dealer or company-operated outlets, or those operated by independents. The cost level of the refiners' company-operated outlets is, therefore, of considerable interest in analyzing the increasing share of refiner-operated, self-serve outlets. Much of this growth, as discussed in Chapter XIV, is unquestionably due to the decline in demand for the repair and maintenance services of the traditional outlets. It is also relevant to ask how the refiners' own retail costs compare to the support levels allowed dealers, and also how they compare with the margins available to independents.

Retail gasoline costs share with other areas of retailing the characteristic of being highly variable, depending as they do on location, level of service and whether and which other products are sold in addition to gasoline. Some of the cost variability and other difficulties can be reduced where gasoline is or can be treated for practical purposes as the only product sold. This comes close to being so at many self-serve outlets that tend to have few repair and maintenance services. The most intractable problem, that of allocating costs among several goods or services, is thereby eliminated. (The result is, nevertheless, some overestimate of the cost of distributing gasoline, since motor oil and other items are also sold in many self-serve outlets.)

Even though the elements of a cost curve for a self-serve gasoline outlet are straightforward, there is room for error and for differences of opinion. Although the Commission was able to draw on an internal confidential study by Imperial Oil[7] and on information on equipment costs tendered by Gulf, the Commission's assumptions underlying its cost calculations in Table 3 were not tested. The cost calculations can only serve as a rough average.

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[7] There are a number of points where the Imperial and Commission approaches diverge for the reason, primarily, that the purposes of the cost calculations were different. The cost figures in the text, while drawing extensively on the Imperial study, do not represent Imperial's internally estimated costs.

There are, undoubtedly, outlets on sites worth a lot more and a lot less than the figures used in the calculations below. Similarly, wage costs and municipal taxes vary by city and by geographic area. If the numerical results were going to be pushed very far in reaching conclusions, more company-specific and region-specific information would have been required. The Commission believes however, that there is great value in using numerical information to make more concrete the cost side of retailing and some of the difficulties and considerations entailed in trying to evaluate allegations of predation.

The number of outlets overall, and even within large and growing cities, has been falling for many years. The decline in the number of outlets due to the changing composition of demand has been exacerbated in recent years by the decline in gasoline demand overall. In the 1980s the need for new outlets and conversions has greatly diminished with falling, and now flat, sales. The implication of these changes in sales, for estimating costs, is that much of the capital invested in site improvements can be considered as sunk, even though some of it is transferable from one site to another. As in the case of any sunk capital, the value to be assigned to it depends on its potential earnings.

In a growing industry with investment in new facilities, average total costs, based on the replacement costs of the facilities, provide the relevant cost standard for evaluating predation when examining behavior over a period of time. This standard applies in the current situation to new outlets being opened as a result of shifting population, changing traffic patterns, and differential increases in land values. At the other extreme are the costs relating to outlets that are on the verge of being closed because the return they provide does not cover any of the investment in site facilities and is barely sufficient to justify retention of the outlet rather than selling the site for some other use. In calculating the average costs of these *marginal* outlets only the investment in the land, at its current market value, and in the working capital is included when arriving at the opportunity cost of the investment in the outlet.[8]

Outlets occupying both cost extremes (i.e., those applying to marginal outlets or full replacement) are likely to be found in any majors's network, but most would be somewhere between the extremes. The problem is how to characterize the totality of a refiner's outlets, which should be viewed as a system, or perhaps as a series of regional systems, as well as a set of individual outlets. There is clearly sufficient change to necessitate some investment in new sites and in the upgrading of existing ones. For these investments to be made, prices and margins obviously have to cover more than the cost level at marginal outlets but something less than the full replacement costs for all outlets in the system. In the mid-1970s when conversion to self-serve was in its early stages a figure close to 100 per cent of replacement cost was probably appropriate. In 1984 a much lower figure is indicated.

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[8] The value of the equipment, such as pumps or signs, that could be transferred to other sites should also be included, but this has not been done because the information on the average depreciated value of such equipment is not available.

The extreme ends of the range of cost estimates are shown in Table 3. An intermediate figure based on applying the cost of capital to 50 per cent of the replacement cost of improvements is also shown in the table as approximately reflective of the current situation. Since most costs (excluding gasoline) are fixed, average unit costs are very sensitive to the level of sales, varying almost a full cent per litre between throughputs of 3.5 million litres and 5.0 million litres for full replacement costs.

The cost estimates in Table 3 are not necessarily all incurred by dealers. Those selling on consignment do not bear any inventory costs. Even where dealers are not on consignment they usually do not have the financial carrying costs of the inventory. This depends on the credit terms under which they buy. Therefore, the financial costs of carrying inventory (of the order of 0.1¢/l) have been subtracted from the costs in Table 3 when comparing them with dealer margins in the next section.

Table XVI-3

Cost of Retail Gasoline Distribution, 1984
(cents per litre)

Millions of Litres per annum	3.5	4.0	4.5	5.0
Marginal Outlets	3.01	2.66	2.41	2.20
50% of Replacement Costs	3.93	3.47	3.13	2.85
100% of Replacement Costs	4.39	3.87	3.49	3.17

Explanatory Notes and Assumptions

1. The *real* required return on capital employed (or cost of capital) is assumed to be 14.5 per cent before tax. This is the (approximate) estimated rate for large firms in the retail sector arrived at in the cited study carried out in the Department of Finance. It would have been impossible to estimate firm-specific costs of capital for retailing because of the integrated nature of the petroleum companies. By using the real costs of capital, inflation and the capital gains on the invested capital are already allowed for. It should be clear that if (higher) *nominal* rates had been used without allowing for the effects of inflation the cost estimates would have been much higher and would have been more likely to show a "squeeze" of independents' profit margins.
2. The cost estimates for *marginal outlets* include the cost of labor, credit cards, maintenance and repair, realty taxes, accounting and administration, and a 14.5 per cent return on the value of the site and the inventory.

3. Credit cards are assumed to be used in 30 per cent of transactions and the cost to be 2 per cent of the value of the transaction.
4. Labor costs are based on $6.00 per hour and on outlets being open 20 hours per day, which is an average of the 16 or 24 hours per day that most stations are actually open.
5. Replacement costs are based on depreciation and return on capital on 50 and 100 per cent of site improvements, respectively.
6. The values of land and improvements used are, respectively, $183,127 and $219,553.

Sources: Exhibit M-623 (Imperial), Exhibit M-416 (Gulf). *Theory and Empirical Methodology Underlying the Measure of Marginal Tax Rates for the Discussion Paper: "The Corporate Income Tax System: A Direction for Change"*, Table 6.21, Corporate and Resource Tax Analysis, Department of Finance, 1985, Ottawa, Canada.

An important area of cost which is dealt with separately from Table 3, is advertising and promotion. These are (at some geographic level) system-wide activities that fall between wholesale and retail. Their omission does not affect comparisons between the level of costs in company-operated self-serve outlets and margins earned by dealers at self-serve outlets, but does affect comparisons with the margins earned by independents. The level of promotion and advertising changes, at least partly, with competitive conditions and can vary over a wide range. Using 1980 figures, Texaco in its submission on marketing assigned a value of 0.18¢/l (or 0.8¢ per gallon) to these activities, which in 1984 dollars is equal to 0.25¢/l.

Another cost incurred at the wholesale level that must be added when comparing refiners' costs with margins earned by independents is for transportation, which in 1984 dollars averaged about 0.49¢/l. This cost is particularly variable, depending as it does on the density of outlets and their distance from storage terminals. Other wholesale costs are primarily accounting and managerial. These are included in Imperial's internal cost estimate that is used for comparison with independent's available gross margins in section 7.

(c) Tests For Predation

In the Commission's view it is important that there be a standard of "predation", which is to say a line beyond which conduct by one firm that has harmful effects on another firm's ability to stay in business or to compete, is unjustifiable and against the public interest.

Several possible tests for identifying alleged predatory conduct may be found in economic literature and judicial decisions. Those most widely referred to relate to (different) cost-price relationships, and others to patterns of pricing or output. Some tests are alternatives; several can be used in combination.

Some argue that predation is rare because it is very expensive for the would-be predator in terms of lost profits, and that where a predatory course is embarked upon it is likely to be abandoned when the costs and difficulties of achieving the desired goal are perceived. According to this view, a very rigorous approach to identifying alleged predatory conduct is necessary lest desirable competitive activity be discouraged in trying to deal with conduct that rarely occurs.

Another view is that outright predation, where the goal is to bankrupt rivals, is not necessarily the problem and that even firms with financial depth are more likely to use temporary losses as a means of disciplining rivals in order to induce them to change their policies — i.e., to act less competitively. For example, at a number of points the Green Book alleges disciplinary conduct on the part of the majors towards the independents. Whether "predatory" or "disciplinary" conduct is being alleged the issue is, however, the same.

The significance of the cost tests in this context is that they are designed to identify objectively what would normally be regarded as irrational market behavior. For example, the Areeda-Turner test requires that predatory conduct only be considered a possibility when the alleged predator sets prices below short-run marginal costs (i.e., the additional cost incurred in selling one more unit). There are certain situations in the petroleum industry where the mechanical application of such a pricing rule would result in a misidentification of predation. For example, it may pay to price below short-run marginal cost in order to avoid shutting down facilities, such as refineries, that are costly to restart. A similar argument applies where discontinuing sales for a time would entail a loss of goodwill, as stated by several witnesses in referring to retail gasoline outlets.

Equal care is required in ruling out possible predatory or disciplinary conduct where prices exceed short-run marginal cost. It is necessary to consider the time frame and the market context. The difficulties and costs of trying to engage in predatory or disciplinary conduct do not apply to dual distribution where the alleged predators have varying degrees of influence over prices at two levels.

In the very short run, marginal costs (excluding gasoline costs, as throughout the analysis) are effectively zero, since all costs are necessarily incurred as long as the outlet is kept open. The immediate decision facing the operator, then, is whether to keep the outlet open or to close it for a time. The longer run question is whether to retain the outlet or to dispose of it. In the long run the operator must also decide whether or not to replace worn out equipment and otherwise invest in a higher standard of operation. When the overall network is taken into account, an additional relevant question is whether to invest in additional outlets. The range of cost estimates in Table 3 relates to the two longer run decisions: is an outlet to be permanently closed and are further investments to be made in existing or new outlets? The cost estimates in Table 3 form the appropriate standards for comparison with the available information on dealers' and (in modified form) independents' margins over longer periods.

Declining margins to very low or negative levels during fast-falling retail prices (e.g., price wars) are a particular concern to independents. Initially, at least, this is a short-run situation. The majors' marginal retail costs are approximately zero and their marginal wholesale costs consist primarily of transportation from terminal to outlets. An independent should be assured that he could obtain supplies at a price no higher than the retail price being charged by his supplier in the marketing area, less transportation costs. While this standard may not provide much comfort to an independent it at least provides minimum protection, and if the situation persisted for some time a higher cost standard would become appropriate.

Insofar as predatory pricing is concerned the Commission considers that section 34(1)(c) of the existing Combines Investigation Act, particularly if supplemented as proposed by Bill C-91, is adequate. Section 34(1)(c) and Bill C-91 are, however, very general and so the Commission has identified what it considers are appropriate cost guidelines to apply, within the scope of the existing law, in a dual distribution context.

Section 34(1)(c) of the *Combines Investigation Act* provides that a person engaged in a business commits an indictable offence if he "engages in a policy of selling products at prices unreasonably low, having the effect or tendency of substantially lessening competition or eliminating a competitor, or designed to have such effect".

There is unfortunately no realistic way of eliminating the generality of the standard of reasonableness, and this is confirmed by the jurisprudence under the section. For example, the Ontario Supreme Court in *R. v. Hoffman-LaRoche* (1980) held that exclusive reliance on price-cost relationships was too inflexible and that four factors in particular should be considered, in light of all the circumstances of the case, in order to determine whether or not a price is "unreasonably low": the length of time during which sales at the questionable prices take place, the circumstances of the sales such as whether a price cut was in response to price reductions by others, the actual difference between the production cost or accounting cost and the sale price, and the amount of the reduction below cost. The Court further stated that "whether any external or long-term economic benefits will accrue to the seller by reducing its prices below cost" should also be considered.

Part of the reason for generality and flexibility in the standard is that the greatest care must be taken not to inhibit aggressive competitive behavior, which may involve pricing based upon reasonably anticipated long-run costs. In addition to the jurisprudence, flexibility is also reflected in the enforcement policy of the Director when he examines complaints of predatory pricing (Director's *Annual Report*, 1982, p. 16):

> While it is unlikely that a price above average total cost of the firm complained against would be found to be unreasonably low, a price below that level will be considered in the light of its relationship to that cost standard or to variable cost, its duration, apparent purpose, whether aggressive or reactive, the market position of the parties, history of their behavior and apparent long term consequences. The analysis will also take into consideration any indication that the alleged aggressor had used pricing selectively for disciplinary purposes, the extent to which that firm would be the beneficiary of the weakening or demise of the complainant, and whether barriers to entry were such that any firm driven out of the industry could not readily be replaced as a competitor.

Under Bill C-91 the Competition Tribunal will in appropriate cases be empowered to prohibit the following practices (proposed section 50(a) and (d)):

> (a) squeezing, by a vertically integrated supplier, of the margin available to an unintegrated customer who competes with the supplier, for the purpose of impeding or preventing the customer's entry into, or expansion in, a market;
>
> (d) use of fighting brands introduced selectively on a temporary basis to discipline or eliminate a competitor.

As indicated above the Commission offers some guidelines for application within the existing law and the Bill C-91 proposals to help identify unjustifiably low pricing by a supplier in a dual distribution context. In offering these guidelines the Commission stresses that in this Inquiry there was no charge that a predatory pricing offence had been committed, and there were no specific allegations. Accordingly there was no defence offered and the Commission makes no finding as to whether or not appropriate standards of predation were contravened in the past. Indeed, it was not the purpose of this Inquiry to seek to resolve such issues. Nevertheless, the Commission considers that it has a sufficient basis of information on which to elaborate cost guidelines for identifying predation or unjustifiably low pricing in a dual distribution context. They fall into two categories, depending on the circumstances:

1. In the very short run, say, days and perhaps weeks, only the time frame is important, and the relevant standard is short run marginal cost. At the retail level these are very close to zero excluding the cost of gasoline, and at the wholesale level they consist primarily of transportation costs. This is why it is proposed that independents should not be required to pay

more, at any time, than the lowest retail price charged in the independent's market area by the supplier (i.e., at outlets where the supplier sets the pump price), less reasonable transportation cost. This is a minimum standard that applies at all times.

2. Beyond very short-run situations and as the time frame is extended to cover longer periods, *minimum costs* are found in what has been called a *marginal* outlet, and costs include all operating costs plus a return on the value of the site. However, if there are ongoing investments in the industry, depreciation on the facilities and a return on at least some part of the investment in facilities may be indicated. In other words, the refiners' net returns from retail sales should be no less than the net return on its sales to either branded dealers or independents in any market area. The calculation of net returns for the purposes of this test would necessarily depend upon such factors as the time frame involved and on whether the industry is depressed, static or expanding.

These tests are consistent with those used in existing Canadian jurisprudence, and are meant to apply to the specific circumstances of dual distribution in the petroleum industry.

Table 3 shows the estimate of cost in *marginal* outlets that would be applied under cost test 2 above (e.g., at 3.5 million litres, a gross margin of 3.01¢/l). Costs above this level in Table 3 are illustrative of the cost levels that might be found under test 2, depending on the proportion of investment in facilities that is included in calculating costs (e.g., at 3.5 million litres, anywhere between 3.0¢/l in a marginal outlet and 4.4¢/l at 100 per cent replacement cost).

For reasons explained subsequently the bottom of the range of cost test 2 is most appropriate in evaluating whether the majors have been squeezing their dealers. This discussion is found in the following section. It is followed by a discussion in section 7 in which the margins available to independents are compared with combined retail-wholesale costs using both the bottom end and a mid-point in the cost range under test 2. Failure to pass the relatively weak test provided by the bottom end of the range raises a question about how well wholesale markets have been functioning.

6. Dealer Margins

This section is designed in part to satisfy the public's interest in the margins earned by dealers, and, additionally, to compare these margins with costs at the majors' company-operated outlets along the lines discussed in the previous section.

The predominant factor determining dealer margins has been the existence of support programs. Dealer margins have been set, over long periods in many areas, by the amount of support granted by the refiners. The extent to which dealers were under support between October 1984 and October 1985 in a number of Canadian cities is illustrated for full-service outlets in Table 4 and for self-serve outlets in Table 5. The maximum support for self-serve outlets was 2.5¢/l and for full-service outlets it was 3.0¢/l. The fact that refiners, with the exception of Petro-Canada (and previously Gulf), tend to operate their major-brand self-serve outlets means that a relatively small proportion of self-serve outlets actually received support even in areas where there was little difference between the retail and the DTW prices.[9]

Between October 1984 and October, 1985 Regina was the only city where the average margin at self-serve outlets, 3.3¢/l, was appreciably more than the maximum support level. In Ottawa, Toronto and Winnipeg retail prices did not exceed the DTW price by 2.5¢/l in any month. In other cities the retail margin was above 2.5¢/l in some months, but the highest average margin over the 13-month period was 2.7¢/l.

The situation was not dissimilar for full-service outlets, with the exception that dealer margins were well above maximum support levels in St. John's, Charlottetown and Halifax. Once again, margins in Regina were also above the maximum support level of 3.0¢/l.

The measured margins do not fully reflect the margins being earned by dealers. Where dealers own their own station sites (and occasionally the improvements thereon) and enter into a cross-lease with refiners, they normally receive compensation in addition to the level of support or the difference between the retail and DTW prices. The inducements offered under a cross-lease obviously depend on competition among suppliers and on the value of particular sites. The rapid decline in the number of outlets over recent years suggests that the inducements have, on average, also fallen. The terms of cross-leases entered into in 1980 and 1982 in evidence in the inquiry were worth about 0.7¢ to 0.8¢/l. Given the variability in terms, this figure provides only a rough order of magnitude of the addition to the measured margins of dealers who own their own stations. An alternative approach would be to deduct the return on the capital invested in the majors' sites in Table 3. This would reduce the costs to be applied against dealers' margins, exclusive of payments received for signing the "head lease", by 0.6¢/l to 0.7¢/l.

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[9] In a bookkeeping sense the company-operated outlets were also on "support".

Table XVI-4

Retail Full-Service Margins on Regular Leaded Gasoline in Selected Cities, 1984 and 1985
(cents per litre)

	Oct. 1984	Nov.	Dec. 1984	Jan. 1985	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct. 1985	Average Margins**
St. John's	4.0	*2.4*	3.8	3.3	3.5	3.6	3.9	3.9	4.3	4.2	4.2	4.2	4.2	3.9
Charlottetown	5.2	3.4	5.1	4.2	4.5	4.4	3.5	3.4	4.4	4.2	4.2	4.4	4.4	4.3
Halifax	4.3	3.2	4.7	4.1	4.2	4.1	4.2	4.2	4.4	4.4	4.2	4.2	4.2	4.2
Saint John	*(1.5)*	*(2.2)*	*1.3*	*0.4*	*1.4*	*1.8*	*(2.2)*	*(3.3)*	*(4.1)*	*(3.8)*	*(1.3)*	*1.1*	3.3	3.0
Montreal	4.0	*2.3*	3.3	*2.9*	3.3	3.3	*2.7*	*1.0*	*1.1*	*1.1*	*0.9*	*0.5*	*0.4*	3.1
Ottawa	*(1.7)*	*(1.8)*	*(1.4)*	*(1.3)*	*(1.0)*	*(1.4)*	*(0.9)*	*(1.0)*	*(1.2)*	*(2.1)*	*(3.4)*	*(2.0)*	*(1.8)*	3.0
Toronto	*(4.9)*	*(2.3)*	*(1.8)*	*(0.7)*	*(1.8)*	*(2.1)*	*(3.2)*	*(5.2)*	*(4.3)*	*(6.1)*	*(4.2)*	*(3.2)*	*(2.9)*	3.0
Winnipeg	*2.4*	*(3.3)*	*(4.8)*	*(1.6)*	*(5.8)*	*(2.3)*	*1.2*	*2.6*	*1.1*	*(1.1)*	*(3.5)*	*0.4*	*1.4*	3.0
Regina	3.8	*2.8*	3.9	3.7	4.1	3.9	4.3	4.3	4.3	4.3	*(0.4)*	*0.7*	*0.8*	3.7
Calgary	*2.1*	*0.9*	*1.9*	*1.3*	*1.2*	*1.1*	*0.8*	*1.7*	3.4	3.4	3.4	*2.8*	3.2	3.1
Vancouver	*2.4*	*1.7*	*2.7*	*2.1*	*0.7*	*(3.9)*	*2.8*	*2.8*	*2.8*	*2.6*	3.4	3.4	3.6	3.1

* Retail Margin: Pump Price less Dealer Tankwagon Price. Margins *in italics* would in all likelihood be supported by supplying refiners up to 3.0¢/l effective April 1984.

** The average margin is calculated by assuming that dealers were supported up to 3.0¢/l during the months when they would have earned below this amount without support.

Source: Energy, Mines and Resources, Canada.

Table XVI-5

Retail Self-Serve Margins on Regular Leaded Gasoline in Selected Cities, 1984 and 1985 (cents per litre)

	Oct. 1984	Nov.	Dec. 1984	Jan. 1985	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct. 1985	Average Margins**
St. John's	*2.0*	*0.7*	*2.1*	*1.2*	1.5	*1.6*	*1.4*	*1.4*	1.5	*1.5*	*1.4*	*1.5*	*1.5*	2.5
Charlottetown		none reported		*2.3*	*2.4*	2.6	*2.0*	*2.0*	2.9	2.8	2.8	2.9	2.9	2.7
Halifax		none reported												
Saint John		none reported												
Montreal	3.8	*2.0*	3.0	*2.5*	3.0	2.9	*1.7*	*0.2*	*0.1*	*0.1*	*(0.1)*	*(0.1)*	*(0.1)*	2.7
Ottawa	*(1.8)*	*(2.0)*	*(1.5)*	*(1.7)*	*(1.2)*	*(1.7)*	*(1.1)*	*(1.1)*	*(1.4)*	*(2.3)*	*(3.2)*	*(2.4)*	*(1.8)*	2.5
Toronto	*(4.8)*	*(2.3)*	*(2.1)*	*(1.5)*	*(2.2)*	*(2.0)*	*(3.6)*	*(5.2)*	*(4.5)*	*(6.2)*	*(4.7)*	*(4.1)*	*(3.4)*	2.5
Winnipeg	*2.0*	*(4.1)*	*(5.4)*	*(2.2)*	*(6.3)*	*(4.3)*	*0.7*	*2.1*	*0.5*	*(1.6)*	*(4.0)*	*0.2*	*1.7*	2.5
Regina	3.4	*2.3*	3.3	3.1	3.7	4.1	3.7	3.9	3.7	3.7	*(2.1)*	*0.1*	*0.1*	3.3
Calgary	*1.0*	*(0.5)*	*0.6*	*(0.1)*	*(0.4)*	*(0.4)*	*0.3*	*1.0*	2.9	2.9	2.9	*2.5*	2.6	2.6
Vancouver	*2.1*	*1.4*	*2.4*	*2.0*	*0.4*	*(4.5)*	*2.5*	*2.5*	*2.5*	*2.4*	3.1	3.1	3.3	2.7

* Retail Margin: Pump Price less Dealer Tankwagon Price. Margins *in italics* would in all likelihood be supported by supplying refiners up to 2.5¢/l effective April 1984.

** The average margin is calculated by assuming that dealers were supported up to 2.5¢/l during the months when they would have earned below this amount without support.

Source: Energy, Mines and Resources, Canada.

When the inducements to dealers with cross-leases are added, the dealer margins at self-serve outlets in areas where dealers were on support were about 3.2¢/l. The estimates in Table 3 of average costs at marginal outlets and at outlets where 50 per cent of the replacement cost of capital is included were, after excluding the estimated carrying costs of inventories:

Millions of Litres per annum	3.5	4.0	4.5
Marginal Outlets	2.87	2.54	2.31
50% Replacement Cost	3.79	3.35	3.03

In comparing the dealers' margins with the majors' own retail costs the appropriate cost level to be used as a yardstick is that at marginal outlets, plus some investment in site improvements such as paving, since under cross-leases the majors generally funded investment in tanks and equipment. Based on this yardstick the support levels plus inducements under cross-leases were above the majors' own average costs at all realistic levels of output.[10] These data do not support concerns that the level of support provided to dealers squeezed their margins.

Outside of the cities in the Atlantic Provinces and to a lesser extent Regina where the retail margins at full-service outlets were relatively high, the average differences between the full-service and self-serve margins were 0.4¢/l to 0.5¢/l, or roughly equal to the difference in support granted to full-service and self-serve outlets. For reasons discussed in the previous section of this chapter the Commission does not believe that it could usefully undertake to estimate average costs at outlets where goods and services other than gasoline are sold. It is not known, therefore, whether the differential margin between full-service and self-serve outlets was sufficient to cover the average cost differential between these outlets. Based on Imperial Oil's internal cost estimate referred to in Table 3 the cost difference is well in excess of 1¢/l even before any return on capital is taken into account. This difference is undoubtedly due to the large difference in average sales by the two types of outlets.

7. Gross Margins Available to Independents on Retail Gasoline Sales

The Commission examined the gross margins available to independents in Eastern Canadian markets,[11] as represented by Montreal and Toronto, following allegations by the Director of Investigation and Research and in response to complaints from independents that refiner/marketers were setting wholesale/retail prices so as to squeeze them out of business. The Director argued, at the end of the evidence before the Commission, that there had been a constant policy by refiners to discriminate against independents by offering preferential supply prices to certain classes of trade, such as the refiner's branded or second-brand dealers, or those private-brand outlets operating under long-term supply contracts or under special private-brand agency contracts which provided various margin-per-litre guarantees in exchange for partial/complete control over price setting.

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[10] This conclusion is of course sensitive to the cost assumptions in Table 3, and particularly the one relating to the cost of capital.

[11] Although some complaints were received from independents in British Columbia, the data were only sufficient to examine the gross margins of independents in Eastern Canada.

The gross-margin data in tabular form and an explanation of the data and methodology are provided in Appendices K and L. Considerable inflation during the period covered means that the margins measured in current dollars are only very roughly comparable over time. The margins measured in constant 1981 dollars allow better comparisons over the entire period even though the index used is imperfect. Unless stated otherwise, the discussion of gross margins is based on inflation-adjusted figures.

Average annual gross margins for regular leaded gasoline in Montreal and Toronto from 1974 to 1982, are shown in Figures 4A and 4B. The gross margins are the difference between retail prices from selected types of outlets in Toronto and Montreal and wholesale prices, with the latter in the form of refiner sales realizations from independents after allowing for support allowances. The retail prices include Statistics Canada's self-serve annual average prices and simple annual averages of national major self-serve, national major second-brand full-service and independent full-service pump prices based on individual retail outlet pump price data surveyed by Kent Marketing Services.

The representation of certain of the arithmetic averages from Appendix L in graphic form in Figures 4A and 4B suggests a precision that can be misleading. The attempt to simplify involves ignoring variations in retail and wholesale prices. Variability in retail prices is generally recognized as a potential problem because of the rapidity of changes in retail prices and the fact that large areas such as Montreal and Toronto consist of a number of interconnected markets among which there can be significant price differences at any time.[12] In particular, it cannot be concluded that the fact that the majors' second-brand and self-serve (in Montreal until 1978) average prices were below those of the independents indicates that such differences were occurring in the market areas where these outlets were in direct competition. Many independents priced with the majors, which in some markets meant matching the prices of full-service outlets, with the result that the independents' average prices for large areas such as Montreal and Toronto would be pulled above the average prices of second-brand and self-serve outlets that were meeting the prices of lower-priced independents. Also, much variation in wholesale prices shows up in differences in average realizations of sellers, in average realizations from sales to largest and smallest customers, and in the range of reported wholesale prices in *Oil Buyers Guide* where reported prices differing by as much as 5¢/l within a month show up in the early 1980s. While such a large range was rare, differences of the order of 2¢/l were not. The variation in wholesale prices appears, however, to be related to the size of the available margins, which means that the variations were much smaller during periods of narrow margins.

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[12] The effect of sampling variability in retail prices clearly shows up when the annual average self-service prices obtained from Kent surveys are compared with those obtained from Statistics Canada.

Differences in prices paid by different types and/or sizes of buyers is of particular potential significance. As seen in Table 7 presented later in this section, smaller buyers generally paid much higher prices during 1979-1983. If the same pattern occurred during earlier years the margins available to smaller independents were smaller than those shown in Figures 4A and 4B.

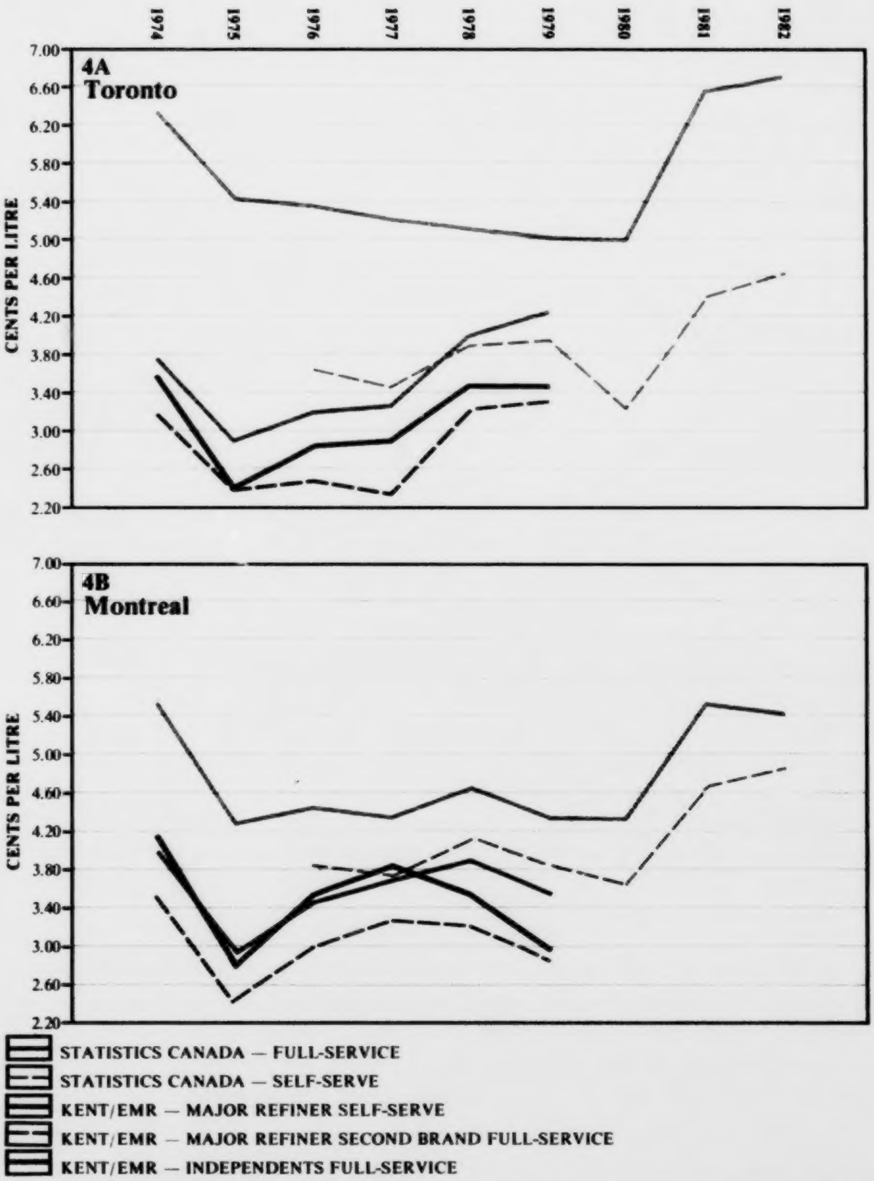
Figures 4A and 4B only permit the identification of broad industry trends. An analysis of the experiences of particular independents and refiners would require much more detailed data.

An examination of the margins in Table 4 of Appendix L relative to all the different types of outlets shows that there was a sharp decline in margins in Toronto between 1973 and 1975. The latter year was a tough one for independents relative to most of the margins shown in Figure 4B. While there was some recovery in margins they continued at a relatively low level until 1978 and fell once again in 1980.

There was a similar sharp decline in all margins in Montreal between 1973 and 1975. Compared to Toronto there was, however, a stronger recovery after 1975.

The margins shown in Figures 4A and 4B tend to be understated because they relate only to regular leaded gasoline, and available information indicates that the margin on regular leaded is generally lower than on that for the other grades of gasoline (e.g., Table 7 below). The understatement is likely to have been greater in Montreal than in Toronto since the sales of premium gasoline were higher in Quebec than in Ontario.

FIGURE XVI-4.
Selected Annual Gross Margins Available to Independent Resellers of Regular Leaded Gasoline, 1974 to 1982,
In Constant 1981 Cents Per Litre — Toronto and Montreal.



Cost estimates allowing comparison with the independents' available gross margins in the mid-1970s are not in evidence. Imperial Oil's internal cost estimates in 1981 do, however, provide a comparison for independents' average available margins in 1980 which, based on the available data, was the last year when margins were relatively low. Imperial's cost estimate was modified somewhat before it was applied. Investments in terminals and trucks were excluded from the capital employed at the wholesale level in order to avoid double counting, given that the Commission was adding a separate transport cost component to Imperial's estimate. The investment in terminals would have had to have been excluded in any event since they are required by Imperial when making sales to independents. There are similarly certain administration and accounting costs that are incurred when selling to independents that were unknown. Without them the cost standard is therefore unavoidably overstated to some extent. To allow for this consideration 0.2¢/l was deducted from Imperial's costs in preparing Table 6. The results in Table 6 are somewhat sensitive to upward variation in this cost of accounting and administration. There is no change in Table 6 under an alternative cost assumption of 0.1¢/l, but at 0.35¢/l two observations regarding the grouped independents fall out of Table 6, one in Montreal and one in Toronto.

In preparing the comparisons in Table 6, advertising and sales promotion costs of 0.18¢/l and a transportation cost of 0.36¢/l were added to Imperial's costs since no provision was made for these items in Imperial's estimates. The Commission also used its estimate of 10 per cent as the real cost of capital in 1980 along with the nominal rate used by Imperial's analysts.[13] The remaining cost components were deflated to 1980 costs with the Consumer Price Index.

Table 6 shows the results of comparing the available gross margins in Table 7 in 1980 with Imperial's internal combined wholesale plus retail cost estimates for sales through self-serve outlets in 1981. The Commission does not see any point in discussing Imperial's estimates in detail and therefore has simply indicated when the available margins were below one or another of the various cost estimates.

The available gross margins of the smallest independents were noticeably low relative to the estimated costs of marginal outlets in Montreal and Toronto. Only with the cost of capital used by those who prepared Imperial's cost study are the margins of other classes of buyers low relative to the cost guidelines identified above in this chapter. The Commission believes that this

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[13] The figure has to be arbitrary because 1980 was in a transition period of rapidly increasing real interest rates.

Table XVI-6

Identification of Situations when Gross Margins Available to Various Categories of Independents in 1980 were Lower than Imperial's Combined Wholesale-Retail Costs in Self-Serve Outlets in 1981

A. Montreal

	Self-Serve	
Cost of Capital	(10%)	(Imperial's)
Largest Two Independents		
– Marginal Outlet		
– 50% Replacement		
Grouped Independents		
– Marginal Outlet		
– 50% Replacement		X
Smallest Two Independents		
– Marginal Outlet	X	X
– 50% Replacement	X	X

B. Toronto

	Self-Serve	
Cost of Capital	(10%)	(Imperial's)
Largest Two Independents		
– Marginal Outlet		
– 50% Replacement		
Grouped Independents		
– Marginal Outlet		X
– 50% Replacement		X
Smallest Two Independents		
– Marginal Outlet	X	X
– 50% Replacement	X	X

Sources: Exhibit M-623 (Imperial Oil) and Table XVI-7 of this Report.

cost of capital is far too high for the purposes of the present analysis, since Imperial's rate is a nominal rate and a real rate is more appropriate (see Table 3, note 1). In any event these results certainly allow for the possibility that one or more categories of independents had lower margins in a number of years in the 1970s (when margins measured in constant dollars were relatively low) than refiners' combined wholesale/retail costs at self-serve outlets.

Based on the estimates of Imperial's cost levels in 1981 and allowing for inflation the independents' available annual average margins in Table 6 were, save for the smallest independents, relatively comfortable after 1980. The considerable variation in monthly margins during the price wars in 1983 is of course hidden in Table 7. There were months during the spring when margins were close to zero or were negative. They were balanced by very high margins in the following months, suggesting that the independents were benefitting from lagged margin-support payments.

Table XVI-7

Average Annual Gasoline Gross Margins Available to Independents Relative to Major Self-Serve Prices 1979 to 1983
(In Constant 1981 Cents Per Litre)

		Greater Toronto		Greater Montreal	
		Regular Leaded	Regular Unleaded	Regular Leaded	Regular Unleaded
Largest Two Independents	1979	3.1	4.0	3.8	4.6
	1980	4.1	4.5	4.4	5.0
	1981	4.7	5.3	5.1	5.9
	1982	5.0	5.6	5.4	6.4
	1983	6.3	6.6	5.6	5.9
Smallest Two Independents	1979	2.5	2.5	2.3	2.7
	1980	1.8	1.3	2.5	2.6
	1981	2.9	2.6	2.7	3.8
	1982	4.2	4.5	3.2	4.2
	1983	2.6	3.2	2.8	4.3
Grouped Independents	1979	3.9	4.7	4.3	5.1
	1980	3.4	3.6	3.7	4.6
	1981	4.2	4.3	4.8	5.5
	1982	4.4	4.7	5.0	6.0
	1983	5.6	5.5	4.6	4.9

Source: Tables 16 and 18, Appendix L.

The margins available to the smallest independents in Toronto and Montreal were consistently low and fell below the Commission's guidelines set out above. It is appropriate to note, however, that the circumstances surrounding these transactions are unknown and it would be unfair to draw conclusions about predation on the basis of the price-cost information above without considering other possibly relevant factors referred to in section 5(c), above.

The Kent Marketing Services data (Appendix Table J-13) suggests that there was a drastic decline in the numbers of the smaller independents in most centres apart from Montreal between 1974 and 1984. The Commission does not know whether these departures were due to relatively high wholesale prices or to other factors. No specific complaints from this class of independents were made to the Commission (although such complaints were received from heating oil resellers). In any event, it is difficult to see how any firm could long survive with the margins of the smallest independents summarized in Table 7.

8. Refiners' Realizations on Sales to Commercial/ Industrial Accounts and to Independents

The differences in net realizations of two refiners on sales to commercial/industrial (C/I) accounts and to independents in Eastern Canada and in Western Canada are summarized in Tables 8 and 9 for regular leaded and regular unleaded gasoline, respectively. The data sources, methodology and more complete tabular results are presented in Appendices K and L.

The purpose of the comparisons is to determine whether refiners have over any lengthy period charged lower prices, net of delivery cost, to C/I customers than to independent resellers. There is, of course, no law against charging one set of customers a lower price than another set if the two groups are not in competition. There would, however, be reason to question the functioning of the markets if the net returns from one set of customers (who have highly elastic demand curves because they are aggressive and often large buyers) were persistently higher than those from other customers.

Several points made by refiners must be taken into account in interpreting the results. The C/I market generally was contracted for a minimum of one year with either a discount or a price subject to escalation for increases in crude oil or tax costs.[14] Therefore, rising or falling market prices (and refiner realizations) would be significantly lagged in C/I markets; only new or renegotiated contracts would reflect current market prices. On the other hand, some independents were historically reluctant to enter into long-term contracts because they preferred the flexibility to shop around.[15] As a result, rising and falling prices (and realizations) would be reflected sooner in sales to independents than to C/I customers. It was also stated that, from time to time, competition drives down the realizations from C/I sector business to marginal levels for the refiner, and at such times the independents also could only expect a marginal return on C/I sector business.

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[14] Some C/I sector contracts range up to five years, but the discount or the price would be renegotiable annually.

[15] This appears to have been particularly applicable to light heating oil where there were many small wholesale buyers; it applies less to gasoline where there are a number of long-term contracts covering a large share of the wholesale market.

The breadth of the C/I customer class and the broad geographic areas covered by the data also invite caution.

The annual data provided by the refiners may not be representative of shorter periods. Monthly industry realizations data for regular leaded gasoline for January 1982 to February 1984, provided by Energy, Mines and Resources Canada, show that monthly C/I realizations in Quebec were below realizations from independents from July 1982 to February 1983 and from August 1983 to February 1984. A similar pattern was observed for Ontario in 1983/1984 and in three other months in 1982 and 1983.

Tables 8 and 9 indicate that, aside from a few exceptions in Ontario and in Quebec and Atlantic Canada, annual average realizations on C/I sales exceeded annual average realizations on sales to independents.

9. Price Wars and Price Competition

Price wars occur only in conditions of oligopoly; that is, where there is competition among a few. Although oligopoly is often associated with price stability, particularly when hidden discounts are not feasible, it can also produce price instability. Whether price stability or instability exists depends on whether one or more firms in the industry see an advantage in trying to improve their relative position by reducing prices, and on whether their efforts are accepted by the other firms. Oligopoly is often associated with price stability because from a tactical point of view it is easy to meet a price cut. Knowing this, individual firms hesitate to reduce prices openly, since any advantage which they obtain by doing so is short-lived if competition responds quickly.

In other market structures, a change in underlying supply or demand factors results in a gradual or rapid change in prices in a single direction until prices correspond to the changed underlying market conditions. A price war resulting from a clash of strategies, such as a disagreement over differentials between types of offerings, will not end until a differential is arrived at which is acceptable (perhaps grudgingly) to all parties. Following the price war, prices usually return very rapidly to pre-war levels.

Gasoline price wars are usually associated with excess capacity at the refining or retail level. The immediate cause, however, is an attempt by one of the sellers to change the relationship of its retail prices to those of its competitors. A firm selling a major brand may try to narrow the differential between its price and that of a firm selling an independent brand (as Gulf did in recent years), or an independent may try to widen its price advantage (as Robo did in Kitchener). If these efforts are resisted, a series of price reductions will ensue.

Table XVI-8

Implicit Wholesale Margin Available to Independents for Sales of Regular Leaded Gasoline to the Commercial/Industrial Sector, 1973 to 1982, In Constant 1981 Cents Per Litre

Year	Atlantic Provinces & Quebec	Ontario	B.C. and the Prairies
1973	0.23	(0.23)	1.44
1974	(0.55)	0.54	0.83
1975	1.44	0.88	1.78
1976	1.97	1.23	2.27
1977	1.85	0.71	1.77
1978	1.74	1.26	1.69
1979	0.57	0.56	1.68
1980	1.64	1.25	2.68
1981	2.82	1.90	2.39
1982	1.96	1.03	2.08

Note: The inflation-adjusted commercial/industrial realizations data used for these calculations have been further adjusted to deduct 0.4 in 1981 cents per litre for delivery costs.

Source: Table 5, Part C in Appendix L.

Table XVI-9

Implicit Wholesale Margin Available to Independents for Sales of Regular Unleaded Gasoline to the Commercial/Industrial Sector, 1973 to 1982, In Constant 1981 Cents Per Litre

Year	Atlantic Canada & Quebec	Ontario	B.C. and the Prairies
1973	6.40	3.03	n.a.
1974	1.80	2.82	1.09
1975	1.55	2.66	2.11
1976	1.54	1.58	2.50
1977	1.77	1.17	2.37
1978	1.75	0.41	1.47
1979	0.72	(0.34)	1.50
1980	1.96	0.58	2.36
1981	3.21	0.98	2.56
1982	2.31	0.64	2.19

Note: 1. The 1973 to 1977 data are for Gulf only.

2. The inflation-adjusted commercial/industrial realizations data used for these calculations have been further adjusted to deduct 0.4 in 1981 cents per litre for delivery costs.

Source: Table 6, Part C in Appendix L.

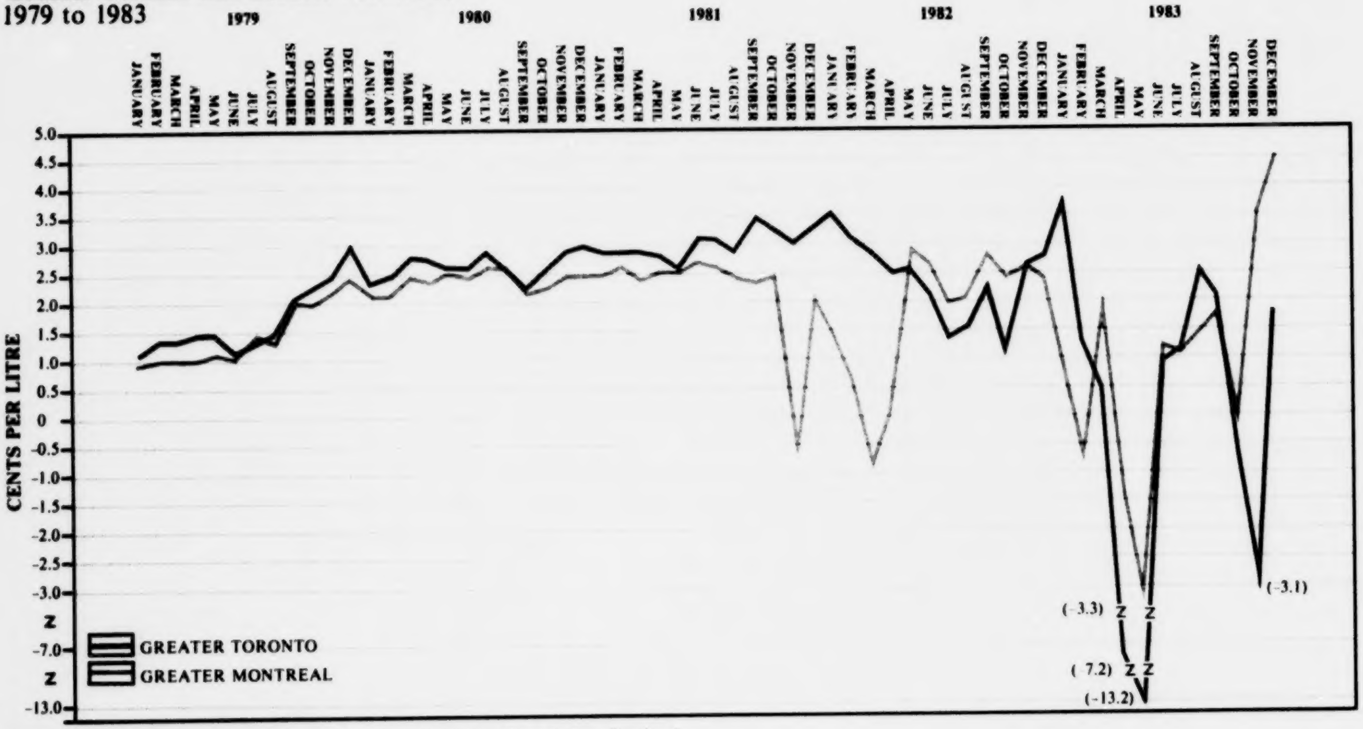
Price wars which go on for some time or recur over a long period can usually be traced to a change in an important factor underlying supply or demand. Excess capacity can result from the addition of capacity by existing firms or from the entry of a new competitor who has a large impact on the established marketers' share of sales. It can also result from declining sales due, for example, to an increase in costs leading to rising prices. The import of product can, of course, have the same effect.

The immediate cause, and one might say the manifestation of a price war, is a disagreement among sellers as to the desirable price differential among their offerings, and hence the distribution of sales among them. Where the underlying cause is excess refining and retailing capacity, as has been the case in recent years, it may be very difficult to identify who first attempts to widen (or narrow) differentials. In other cases, the struggle over differentials may be the result of a tactical or strategic attempt of a specific firm to position itself, as may occur when there is significant entry by a firm with a different offering (e.g., Sunys' self-serve or Gulf's self-serve).

Where the underlying cause(s) persist, price wars are likely to recur. The development of excess capacity following the decline in sales during the years 1979 to 1983 gave rise to several sharp price movements in 1982 and 1983. These are well illustrated in Figure 5 which traces the average full-service price minus the average dealer tankwagon price of regular leaded gasoline in Toronto and Montreal. Although dealer margins were low throughout much of 1982, there was nothing that could be described as a price war. During the early part of 1982 lower prices in Toronto primarily affected dealers' margins, and later in the year the refiners' profitability would have been affected as they were called upon for support. However, given that refiner-marketers now held (and hold) large retail market shares their profitability would have been adversely affected throughout the period of declining retail margins.

The increase in retail margins after October 1982 is part of the puzzling patterns that develop in gasoline marketing. The basic conditions leading to price weakness, excess capacity in refining and marketing, were still present when margins started to improve; if anything, the pressures leading to lower prices were even greater. It is noteworthy, however, that the marketers' publicly declared unified desire to escape red ink did not result in a lasting price recovery. The next decline in prices began in February, 1983 and led to a price war which was probably as severe as any experienced in Toronto. Monthly average prices fell over a four-month period, with the decline in April and May being particularly sharp. The spectacular overnight recovery which followed did not result in the recovery of dealer margins above support levels. This was not achieved until the height of the recovery in August, after which prices and margins once again tumbled.

FIGURE XVI-5.
Average Full Service Prices Minus Average Dealer Tankwagon Prices, Regular Leaded Gasoline, Greater Toronto and Greater Montreal,
1979 to 1983



Source: Petroleum companies (DTW prices) and Statistics Canada (retail prices)

This turbulent period was marked by the reduction of refining capacity in Montreal and the takeover of pricing authority at Sunys and other agents by Imperial Oil in May, 1983 as discussed in section 4 of this chapter.

Although prices and margins recovered in Montreal following May, 1983, it was not until December, 1983 that margins went (and remained) above support levels. There is a strong temptation to tie price recovery in Montreal, and in Quebec more generally, to the refinery closures. Capacity utilization went from 78.4 per cent in 1982 to 89.6 and 82.2 per cent in the succeeding two years. In Ontario utilization rates in the corresponding years were 70.7, 80.7 and 85.5 per cent, respectively. The reduction of excess capacity could certainly be expected to reduce the pressure on prices. A similar effect could also be expected in Ontario, where the absolute changes were as large but where recovery started from a lower base. However, although the refinery closures were probably a necessary condition for prices to rise in Quebec, the reduction in unused capacity is probably not sufficient to explain the firming of prices.

Given that price wars take prices below average total and even average variable costs, the possibility always exists that price wars are used as a strategic weapon to discipline weaker competitors such as independents. Margins available to independents can however be reduced without the drama and cost to refiners associated with a price war. The Commission considers that price wars need not be costly for independents if wholesale prices react[16] or respond to conditions at the retail level, as was the case during 1982 and 1983 when the gross margins available to independents were favorable in most months. (See Table 7 and Appendix L, Tables 16 and 18.)

10. Regional Price Differences

Retail prices net of provincial tax vary considerably across the country. Some of the differences may be due to differences in retail cost conditions and in transportation costs from refineries. What stands out in the most recent period, however, is the importance of regional and local competitive conditions. Refinery capacity utilization, which could be expected to have broad regional effects, may show up as reflecting local conditions as different centers are affected at any time by the attempts of refiners to move product through their own outlets or by discounts in rack prices. Recent experience also shows that purely local conditions can be of critical importance.

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[16] By analogy, the fall in crude oil prices during the winter of 1986 appears to be profitable for refiners in most countries as wholesale and retail prices lag the fall in crude oil prices.

The average prices over the 14-month period covered are shown in Table 10 below. Unless based on slow-changing conditions such as the size of markets or the location of refineries, regional and local price differentials are likely to be changeable. Therefore the information in Table 10 and the following discussion should be regarded as primarily illustrative.

The importance of local market conditions stands out when prices in Winnipeg are compared with those in other Western cities. Alberta, Saskatchewan and Manitoba are, with the exception of the Consumers' Co-operative refinery in Regina, served from refineries in Alberta, with the major part of capacity located in Edmonton. Product is shipped east via pipeline. Logistics would hardly account for the periods of lower prices in Winnipeg compared to Regina, Edmonton and Calgary.

Table XVI-10

Average Served and Self-Serve Prices of Regular Leaded Gasoline Net of Provincial Tax in a Number of Cities, November 1983 to December 1984

	Dealer Tankwagon	Self-Serve	Full-Service
St. John's	41.2	43.20	45.31
Charlottetown	40.5	n.a.	44.86
Halifax	39.0	n.a.	42.88
Saint John	40.0	n.a.	41.28
Moncton	40.6	41.01	41.20
Quebec City	40.1	40.93	41.40
Montreal	39.8	42.40	42.77
Ottawa	40.1	39.12	39.39
Toronto	39.4	38.00	38.23
Kingston	39.9	37.48	38.07
London	39.5	36.28	36.32
Windsor	39.4	35.36	35.44
Thunder Bay	40.5	37.83	38.13
Winnipeg	38.7	38.70	39.25
Regina	38.3	41.42	41.85
Edmonton	38.0	39.95	40.34
Calgary	38.3	40.90	41.72
Vancouver	39.0	40.97	41.42

Sources: The Department of Energy, Mines and Resources, Canada for dealer tankwagon prices and provincial tax, and Statistics Canada for retail prices.

Thunder Bay is supplied from Sarnia by water and from Winnipeg, which is in turn supplied by pipeline from Edmonton. It does not have any locational advantages apart, perhaps, from the fact that it receives product, ultimately, from two major supply points. The presence of local competitive forces is a more likely explanation of its prices relative to western centers.

Although Sunys (still owned at that time in Thunder Bay by Mr. Robillard after the sale of the rest of the Sunys outlets to Cencan) has only two stations, it increased its sales between 1981 and 1984, a time when overall sales in Thunder Bay were falling. Its overall market share went from 8.1 to 8.7 per cent during this period. Sunys had been an aggressive force in other markets and had a bigger market share than independents are usually able to obtain.

Montreal and Ottawa provide another interesting comparison. Following the price recovery in May 1983, prices stayed relatively firm in Montreal when compared to prices in Ontario centers. The effect of refinery closures (February, May and late 1983) on product prices was clearly an important factor, with effects on capacity utilization in Ontario as well as Quebec. (Supply adjustments in Quebec are discussed in Chapter XIX.) While product prices and profit rates of refiners from 1982 to 1984 clearly show that considerable excess capacity results in generally low prices and profits, which can be reversed by cutting back capacity, local market forces can result in significant price differences. As in the comparison of Montreal and Ottawa the direction of the price difference can be surprising. The higher prices in Montreal are anomalous on four counts: it is a large refining centre; it is a large market; it contains a number of independent marketers; and allied with the last two considerations it has a large port open to ocean-going vessels which should make it more easily subject to the discipline of cheaper imported product. Moreover, Ottawa is supplied through a product pipeline from Montreal and is easily reached from Toronto. Compared with Montreal, it is a much smaller market and is not as easily accessible to imported product. Yet its prices are much lower than Montreal's. Ottawa's prices appear to be tied more closely to those prevailing elsewhere in Ontario than to those at Montreal, one of its principal supply points.

Prices in Ontario were generally lower than elsewhere in the country. This suggests that conditions in the refining sector are an important influence, although price variations across the province demonstrate that local competitive forces also play an important role.

In 1984, in addition to the five national refiners (Imperial, Shell, Petro-Canada, Gulf and Texaco), Ontario was also served by Suncor and by Petrosar, a non-vertically integrated petrochemical producer. The latter's refinery was built in 1977 and provided a source of gasoline supply for independent marketers. There were (and are) more refiners in Ontario than elsewhere in the country.

Many areas of Ontario had had, over the years, a strong contingent of independent marketers. The availability of several sources of supply as well as a relatively dense population in Southern Ontario would undoubtedly be important factors in the establishment and survival of independent marketers.

Refinery capacity utilization appears to be an important factor in the price differences between Montreal, on the one hand, and Quebec, Saint John and Moncton on the other. Low capacity utilization in the Atlantic Provinces, particularly in the Irving refinery in Saint John, appears to have created lower prices in parts of Quebec as well as in New Brunswick during the period covered in Table 10.

Evidence on local price differences usually raises more questions than it answers. Why are some markets more competitive than others? Size is usually a critical factor because it gives scope to more actors and to easier entry. Consumers in less densely populated areas, such as the Atlantic Provinces, the Prairies, Northern communities and in rural areas are generally disadvantaged from this point of view. As the examples previously discussed show, however, size alone may not result in a more competitive environment.

All retail gasoline submarkets can be considered oligopolistic: the number of participants is usually sufficiently small so that each must take into account that anything done that affects relative sales will probably draw a response. The narrowing of price differentials between independent brands and the major brands, particularly as represented in self-serve outlets, has greatly increased the close correspondence between prices in any area.

Under oligopolistic conditions there is no guarantee that excess refinery capacity which leads to lower wholesale or reseller rack prices will translate into price reductions at the retail level. The result may simply be increased margins. The use of coupons is one way of responding to this situation. Coupons, particularly those providing a discount at the pump, are of course price reductions. They can be an effective means of responding to low wholesale prices to independents or of helping to cure a refiner's over-supply situation and, at least temporarily, increasing market share. Lower margins also increase the temptation to cut prices directly because of the larger per-unit profit to be gained on additional sales. On the other hand, given the certainty of a price response which would eliminate the promise of increased sales, this temptation may be resisted. Yet prices do move. Not all retail outlets are neatly clustered. Outlets on high traffic locations, such as secondary highways, are more likely to seek higher volumes without the fear of immediate retaliation. Additionally, even if there is a response from other outlets, the increase in volume to all the outlets in the area may appear to make the price reduction worthwhile. However, prices which succeed in increasing volume are almost certain to result in lower prices in the market areas from which sales are drawn, leading to the further spread of lower prices. The generally low prices in smaller Southern Ontario centers may be explained by the competitive impact of aggressive pricing at outlying outlets.

11. Differentials Among Offerings and Grades and Types of Gasoline

As discussed in the previous two sections, differences of opinion about appropriate price differentials in offerings acted, upon in the marketplace, are the stuff of price competition. If generally accepted views on appropriate differentials are developed this can lead to periods of price stability and, with market leadership, to wide margins. When the Commission began its Inquiry, only regular leaded gasoline prices, if any, were posted in most areas. During hearings in Toronto, following consistent questioning in other centers, some companies announced plans to advertise unleaded prices. This now happily seems to be the general practice.

The ability of retail gasoline markets to settle down to stable price differentials has been displayed for some time in the prices of regular leaded, regular unleaded and premium unleaded gasolines. The evidence clearly shows that the differential between the DTW prices of regular leaded and regular unleaded gasoline are not based on cost differences at the refinery level,[17] nor did the refiners make such claims during the inquiry. It will also be recalled that the margins available to resellers in Montreal and Toronto on unleaded gasoline discussed in section 7 were appreciably higher than on leaded gasoline; that is, the differential in wholesale prices was added to at the retail level.

The differentials appear to be most easily explained by a competitively interdependent industry practice as to what they should be, and it is a practice that is in no one's interest in the industry to break.

The ability of the industry to settle down to such *modus vivendi* is an indication of its potential for stable and high oligopoly prices should conditions allow. Conditions in the form of entry, or excess capacity in refining have frequently not so allowed. Nevertheless, the presence of sufficiently powerful competitive forces to overcome pricing formulae cannot be taken for granted.

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[17] This is illustrated by the differential in prices that refiners charge each other in exchange agreements for quantities over and above those exchanged. There is usually some allowance for an imbalance in the quantities provided and received. The Commission regards the prices on these imbalances as the most accurate reflection by the refiners of their present and anticipated costs over the life of the agreements.

12. Conclusions

1. Dealer tankwagon prices charged by refiners to their dealers have been unresponsive to changes in retail prices with the result that dealers have been forced to seek margin support.

2. Supply arrangements under which refiners obtain partial or complete control over the retail prices of customers with whom they would otherwise compete at the retail level tend to lessen competition at both the retail and wholesale levels. In the Commission's view support programs that relate the amount of support to particular retail prices (as is the case with all margin support programs referred to in the evidence), and that are widespread in the industry, are contrary to the public interest. Similarly, the competitive harm becomes significant when extensive arrangements are entered into between refiners and retailers under branded and unbranded agency agreements.

3. The cost guidelines for predation in the dual distribution environment of the petroleum industry should be as follows:

   (a) Independents should not be required to pay more, at any time, than the lowest retail price charged in the independents' market area by the supplier (i.e., at outlets where the supplier sets the pump price), less reasonable product transportation cost.

   (b) A refiner's net return from retail sales should be no less than the net return on its sales to either branded dealers or independents in any market area. The calculation of net returns for the purposes of this test would necessarily depend upon such factors as the time frame involved and on whether the industry is depressed, static or expanding, but it would be possible to specify with some precision the bottom end of the range associated with these factors.

4. The evidence indicates that the amount of support that refiners offer dealers at self-serve outlets is at least as much as the relevant refiner's costs of selling through company-operated outlets, and therefore cannot be part of a predatory squeeze. Information for evaluating the level of support at full-service outlets is not available.

5. The information to evaluate the gross margins available to independents during periods of relatively low margins in the 1970s is not available. A comparison of the last year of relatively low margins, 1980, with combined retail and wholesale costs estimated primarily on the basis of an internal Imperial Oil study, indicates that the smallest independents in Toronto and Montreal had very low margins. Additionally, the margins of these smaller independents were very low throughout most of 1979-83, the period for which information is available, compared to the majors' costs, which is the appropriate standard for evaluating

independents' margins. Based on this standard, independents above the smallest size class fared well.

6. Refiners' average realizations (which approximate prices) on sales to the commercial/industrial sector in all parts of Canada were generally higher than their average realizations from independent resellers in the period 1973-1982.
7. Regional price differences and swings in prices over time are due to variations in competitive conditions.
8. Price differentials among grades and types of gasoline reflect primarily competitive interdependent conventions that have developed in the industry. Cost differences do not provide a full explanation.

XVII

Rack Pricing

1. Introduction

An important and challenging issue came before the Commission quite late in its proceedings. June 1985 saw not only the "decontrol" of Canadian crude oil prices as agreed under the Western Accord, it witnessed, apparently in response to deregulation of crude oil prices, the introduction into the Canadian market of a new system for pricing petroleum products. In that month, Imperial Oil started to sell gasoline, diesel and heating oils to certain classes of customers in accordance with a new so-called "rack pricing" strategy. The Commission called hearings and received evidence and argument on this matter in late 1985.

The terms "rack price" or "rack pricing" can lead to confusion because they are often applied to quite different types of transactions. Traditionally, a "rack price" was a "spot price" paid by those picking up product at the delivery rack at a refinery or supply terminal. Alternatively, the term is sometimes used as a synonym for "refinery gate pricing". This latter concept has not been practised in the industry but has been the subject of repeated proposals by the National Automotive Trades Association and many individual dealers. "Refinery gate pricing" would have each refiner post a single price for each grade of gasoline at each refinery or supply terminal. The price would be available to all customers on any given day regardless of class of trade, volume or any other consideration. Separate charges for any additional services (transportation, credit, advertising, credit card services) would be added to the refinery gate price. A third application of the "rack pricing" terminology is its use to describe the new pricing strategies introduced by some Canadian refiners during 1985 and described below.

2. Imperial Oil's Rack Pricing Strategy

Imperial Oil's new pricing system applies to five classes of customers. The principal features of the new system are described below.

The *rack price* is the price paid by *large volume wholesalers or resellers* who pick up the product at the refinery or supply terminal rack. Imperial is now posting or publishing a rack price for each of the three grades of gasoline, for diesel and for light fuel oil at each Imperial Oil refinery or major supply terminal. The prices can vary by geographic zone.

The rack price relates to 15-20 per cent of Imperial Oil's total sales of gasoline, namely, sales to independent resellers buying at the rack. Should other Canadian refiners buy product from Imperial Oil, they too would pay the rack price. To be eligible for the rack price, buyers must purchase minimum annual volumes of 20 million litres of motor fuel (enough to supply five or six retail outlets) or 10 million litres of heating fuel. Smaller volume buyers will pay a variable premium on top of the rack price.

Under its new pricing system, Imperial's policy is not to give discounts to large volume domestic customers at the rack. It will, if necessary to achieve desired sales, offer discounts off the rack price on export sales, which at the time the Imperial Oil witnesses appeared, were provided primarily to its parent company. Recent press reports tell of some Imperial sales into U.S. markets occurring at prices below those offered to domestic resellers, a fact reportedly acknowledged by Imperial.

With regard to this first class of customer (private-brand independent resellers), the new pricing system differs in three important respects from earlier supply arrangements.

1. The prices (to independent resellers) are all "spot". Rack prices can be increased or decreased as often as judged necessary by Imperial Oil officers so as to remain competitive with other sources of supply. Previously, only customers buying under short-term or without contracts purchased under flexible or negotiated prices, and even then Imperial (and other suppliers) provided several weeks' notice before changing prices.[1] Much of Imperial's sales to private-brand resellers were under long-term contract under which the prices were tied to refining costs (such as crude oil costs), or under which the resellers acted as a consignment agent for Imperial and received a commission. All of these long-term arrangements are being phased out or are under negotiation with a view to their being eliminated.

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[1] Although all independents who picked up other product at the terminal were literally buying at the rack, the term under some industry usage was reserved for supply arrangements with flexible pricing.

2. Imperial, and other companies who have followed its lead, quote their rack prices in the trade press. In the past, rack and term contract prices reported in the trade press did not identify suppliers or buyers. Imperial's prices also appear on an industry-wide, computerized information system (Tele-rate).

3. Imperial has stated a policy of not granting any discounts off its published prices or support to private-brand resellers. In the past, prices under both short and long-term contract, as well as support, were often negotiated. Prior to the introduction of "rack pricing", sales to private-brand resellers were often made at negotiated prices with the result that the prices charged to different customers could and did vary. Individual supply agreements varied as well as to credit, volume discounts, delivery charges or prices tied to the price of crude oil or to a processing fee. Resellers had some bargaining power in that they could shop around among the various suppliers in search of the best available price or "package". Another important element of the "old system", particularly in recent years, was that some margin protection or rebates were sometimes available to protect resellers during price wars or periods of depressed prices. Refiners found that they had to offer such protection if they were to avoid losing resellers to other sources of supply. The elements of uncertainty and variety which characterized the former supply agreements with independents are thereby greatly reduced if not entirely eliminated.

It is only this third element (the publication of the fact that Imperial will no longer offer discounts off its published prices or other support to rack buyers) in the new rack pricing system that concerns the Commission.

The prices to the remaining four classes of trade described below range upwards from the rack price. Their precise levels will reflect local market conditions but they are not expected to ever fall below the "floor" in the hierarchy of prices, the rack price.

The second class of customer affected by Imperial Oil's new pricing system is *large commercial and industrial accounts*. Prior to June 1985, the prices on sales of products to large industrial and commercial customers were established through negotiated discounts off Imperial Oil's posted price (or through the customer calling for tenders). Since June 1985 this class of customer is being offered Imperial Oil's *direct delivered price* provided the customer has the storage tank capacity to take at least 20,000 litres of at least one product. The direct delivered price can vary by geographic zone. The differentials between each of the five product prices can vary geographically and over time. Volume discounts and discounts for early payment are available but such discounts cannot reduce the direct delivered price below the rack price described above. Imperial Oil's direct delivered price is being published but any discounts off that price are not. Imperial Oil will continue to tender for such business in accordance with the requirements of the tender calls and the competitive pressures at the time.

The third class of customer is the *small commercial* or *farm accounts* served through agents. These customers are now offered *agency delivered prices*. Prices can vary by geographic zone. To be eligible, the customer must have a minimum 1,000 litre storage tank (putting it just above most residential tanks which are 950 litres). The agency delivered prices are not posted or published. Modest volume discounts are permitted but at no time will they be large enough to reduce the agency delivered price to less than the direct delivered price described above.

The fourth class of customer falling under Imperial Oil's new pricing system is the *residential heating oil customer*. Those customers receive Imperial Oil's *residential furnace fuel price*, an unpublished price, not based on any minimum volume requirements. Unpublished discounts may be available as market conditions warrant.

The fifth class of customer affected is the *branded Esso service station dealer*. He receives the *Esso dealer price*. It applies to the approximately 25 per cent of Imperial Oil's total gasoline business sold through Esso brand outlets operated by dealers.

The Esso dealer price is not posted or published by Imperial Oil. However, dealer prices get to be known around the industry by word of mouth — often through conversations among dealers. There will be no discounts from this price.

The inclusion of an Esso dealer price in Imperial Oil's new rack pricing system represents a major change in the traditional relationship between Imperial Oil and its dealers. Imperial will no longer offer any support programs (consignment or allowances). As a result, dealers will set their own pump prices at all times.

The Esso dealer price includes the cost of the entire "package": the product, delivery, advertising and the use of the Esso trademark. The dealer cannot arrange delivery on his own. He is required to pay on delivery. The price charged to the dealer will be the price at the time he places his order or at the time of delivery, whichever is lower. There will be no after-delivery adjustments to the price charged to the dealer for a particular delivery. However, if the Esso dealer price is found to be noncompetitive, the price to the dealer for his next load will be reduced to take account of a lowering of prices in the market.

The Esso dealer price can be adjusted at any time as market conditions warrant and it can vary over the approximately 100 geographic zones established by Imperial for its administration. There had previously been about 50 DTW zones.

Representatives of Imperial Oil told the Commission that they had adopted their new pricing strategy for several reasons. They believed a more responsive system for establishing and changing prices was necessary in a market in which crude oil prices were now deregulated and a system which was more open to buying and selling petroleum products in export markets. Imperial Oil had been looking for a system that would make its prices known to the thousands of potential buyers in the deregulated U.S. market and perhaps elsewhere, and that would provide potential domestic customers who might be considering importing product, with up to date information on prices available at Imperial Oil terminals. (This reason does not explain why it is necessary to announce prices at the numerous terminals which are not easily accessible to foreign buyers or where customers cannot easily import product.)

Imperial Oil witnesses told the Commission that because the old system involved many different agreements and many different prices it was burdensome and inefficient to administer. Product prices established under the old system in which prices were related to or tied to crude oil prices were particularly difficult to administer in a decontrolled crude oil market in which prices fluctuated much more than they had in the previous, controlled environment. The new rack pricing system was immediately understandable to all, more easily and efficiently administered and, therefore, less costly to maintain.

Imperial witnesses stated that the decision to discontinue support to independents and to dealers meant that Imperial Oil was eliminating a series of burdensome and costly support mechanisms.

Imperial witnesses acknowledged that their hope was that the new system would result in somewhat higher profits from those sectors of the industry affected. They described product prices in recent years as "irrational" and told the Commission that downstream profitability had been "clearly unacceptable" since 1981. Imperial Oil had estimated that if its new pricing strategy was followed by the industry, it would generate an additional 100 million dollars of annual profits for Imperial from those sectors of its product market business. Imperial also hoped to reduce retail market inroads by independents.

3. Commission's Observations

It is too soon to know the extent to which Imperial Oil's rack pricing system will be followed or adopted by others in the industry. Shell Canada adopted it over the summer of 1985, in a slightly modified form (different minimum volume requirements) for its reseller customers buying at the rack but not for other classes of customers. More recently, Ultramar has posted rack prices for Toronto, Ottawa, Montreal and Quebec City. So far as the Commission is aware, no other refiner is publishing its rack prices at this time although the President of Texaco Canada publicly congratulated Imperial Oil on its initiative shortly after it was introduced.

Some resellers advised the Commission of their concern in regard to Imperial Oil's initiative. They particularly dislike that part of the policy that no longer permits negotiated discounts. They fear that if Imperial Oil's pricing system is adopted by other refiners the possibility of discounts will be eliminated industry-wide. On the other hand, a press release issued by the Petroleum Marketers Association of Canada in October, 1985, stated that "independent petroleum marketers strongly support the industry trend to rack pricing."

Imperial Oil's direct delivered prices, agency delivered prices and residential furnace fuel prices do not represent marked departures from past pricing systems for those classes of customers. More importantly, they continue to allow for unpublished discounts. The adoption of similar pricing schemes for those classes of customers by other refiners would not appear to give rise to concerns regarding competition because of the continued existence of unpublished discounts or at least the potential for same.

Imperial Oil's Esso dealer price, with the accompanying elimination of margin support, actually decreases the opportunities for Imperial Oil to set pump prices during periods of depressed prices and thereby increases the independence of Esso dealers to set the pump prices at their outlets.

The Director was of the view that Imperial's new pricing strategy would clearly reduce competition in the industry and that Petro-Canada had a role to play in preventing such results. The Director submitted:

> ..., it is imperative that the refiners not be permitted to jointly implement this pricing mechanism. It is unlikely that Imperial's rack pricing policy will succeed in

its objective of eliminating price competition in the wholesale market if Petro-Canada, now the largest refiner/marketer in the industry, is prevented from following. Accordingly, the Commission should recommend that the Minister of Energy, Mines and Resources gives Petro-Canada a specific direction under section 7(2) of the Petro-Canada Act prohibiting it from adopting Imperial's rack pricing policy or any similar program which openly communicates its transaction prices and discount policy to its competitors.

The Commission's concern with the new pricing system established by Imperial Oil is that it, in effect, tells other suppliers that Imperial will not supply resellers below its published prices. There will be no unpublished discounts available from Imperial. As a result, other suppliers know that their potential customers cannot obtain prices from Imperial below those published and, therefore, they, as suppliers, do not have to compete with some unknown offer from Imperial. The visibility of what Imperial is offering to resellers at the rack makes it unlikely that other refiners will wish to destabilize the market by breaking away from a "pattern" of no discounts by seeking a price advantage. There will be little incentive to risk a downward trend in prices by undercutting the published prices of other refiners. This is a particular concern in an environment in which excess refinery capacity has been all but eliminated in Ontario and Quebec.

Imperial's pricing system — its prices and its policy of not offering discounts — is known to its competitors and to its potential Canadian customers. Imperial continues to offer discounts off its rack prices, as required, for export sales (a comment perhaps on the relative state of competition in the Canadian and U.S. markets).

If other refiners were to follow Imperial's lead and adopt similar pricing policies in regard to sales to resellers, the result could well be a substantial reduction in competitive forces in the Canadian industry both at the wholesale and retail levels. The degree of harm to competition is, of course, dependent on the degree to which other refiners adopt a similar rack pricing system. It is difficult to see rack pricing leading to a significant reduction in competition if some refiners do not follow and, instead, continue to offer unpublished discounts to resellers. Indeed, an Imperial Oil document in evidence stated that acceptance of rack pricing by the industry is "critical" to the success of its new pricing strategy.

The Commission can hardly object to any individual refiner introducing a new, innovative pricing system — particularly one that the refiner believes will enable him to be more responsive to market conditions and, therefore, more competitive. Similarly, if a refiner wishes to test market acceptance of a "no discount policy", he should not normally be prohibited from doing so. Finally, the publication of price information, thereby increasing customer awareness, perhaps is, by itself, to be welcomed. The Commission's concern is with the combined effects of such actions if they are emulated by all or most other major suppliers. Together, they result in Imperial Oil's competitors knowing the prices it is offering to resellers shopping around for the best price. The Commission is concerned that Imperial's rack prices and published policy of "no discounts" to large resellers and no sales to smaller resellers below its rack price plus a premium, could be adopted by all or most other Canadian refiners and thereby become a floor price or standard throughout the industry. The result would be a reduction in competition among refiners, a reduction in the bargaining power of resellers, a reduction in the competitive position of independents in the wholesale and retail markets and ultimately, a development contrary to the benefits of a deregulated industry as envisaged by those who signed the Western Accord.

There is no doubt on the part of the Commission that Imperial Oil's introduction of its rack pricing strategy is intended to have those effects. An Imperial internal briefing document in evidence lists the "threats" (as well as the "major opportunities") it sees in deregulation from its point of view as a supplier of petroleum products. The same document sets out the reasons for adopting the new pricing strategy:

> (a) current price pressures are likely to increase under a decontrolled crude and imported product environment;
>
> (b) general expectation that prices will decrease;
>
> (c) more frequent price movements will be amplified in volatile retail markets (Ontario, Quebec City);
>
> (d) refiners and others will import more; and
>
> (e) clean products imports (East) and lubricants imports (West) increase available margins for non refiners.

The same document suggests that the "threats" Imperial officers associated with the deregulation of crude oil prices, could be reduced or overcome by a new pricing strategy designed to "promote the establishment of *markets* for *products* separate from (deregulated) crude oil (prices)". Furthermore, Imperial estimated that if its rack pricing system was accepted by the industry (i.e., followed by other refiners), Imperial would earn an additional 100 million dollars per year from the five classes of customers affected.

In contrast to Imperial Oil which is clearly seeking more stable product prices by isolating them from more volatile, deregulated crude oil prices, the Commission believes it is in the public interest to have a less stable and less predictable pricing environment in which current transaction prices between refiners and resellers are unknown to competitors at either level.

4. Conclusions

The effect of public announcements by suppliers in a tight oligopoly to the effect that they will not be granting unpublished discounts off published or widely-known supply prices, can produce an effect very much like that of a horizontal agreement. It communicates past and current actual transaction prices to competitors of the supplier and to competing customers, and where the products are as homogeneous as petroleum products it presents a real risk to the intensity of price competition. Such is the case with the emerging so-called "rack-pricing" policies of Imperial Oil and other refiners. The no discount aspect of those published policies is not necessary to their legitimate purposes. The expectation of the refiners, and the probability, is that retail motor fuel prices will be stabilized by such a policy and raised above levels that would otherwise exist.

The Commission is, therefore, of the view that public announcements or other forms of assurances to others regarding current transaction prices, including specific discount policies or policies of no discounts, are not in the public interest and should cease. The Commission has not sought to draw conclusions as to whether or not, if enforcement proceedings were necessary, they could be brought successfully under section 32 of the Act or under section 51 as proposed in Bill C-91.

The Commission is further of the view that, in any event, Petro-Canada ought not engage in giving such future assurances whether in the form of general public announcements or otherwise.

XVIII

The Heating Oil Sector

1. Introduction

Next to transportation, the greatest demand for energy in Canada stems from the need to provide heat to households and energy of various forms to industrial and commercial consumers. Fuel oils satisfy an important part of this demand.

Several complaints were made in the course of the hearings with respect to the marketing of heating oil, virtually all raising the question whether dual distribution[1] has at times resulted in prejudicial treatment of independents by refiners. Specific complaints related to:

1. whether independents were fairly treated by their supplier/competitors during periods of tight supply (1973/1974 and late 1978/early 1979);

2. the ability of independents either to obtain or to retain commercial/industrial customers because: (a) the refiner-marketers offered these accounts delivered prices which, net of transportation costs, involved discounts off FOB refinery rack prices which were not available to independents, even though the independents generally purchased in much larger volumes than commercial/industrial customers, and (b) such accounts were often quoted a fixed discount for the entire heating season whereas virtually no independents were given such guarantees; and

3. practices followed by refiners in competing for residential customers which involved (a) discounting retail prices without changing wholesale, supply prices, (b) increasing the wholesale price without changing the retail price, (c) reducing flexible discounts on wholesale prices without changing the retail price and (d) offering discounts to large buying groups. Such practices were stated to have created a squeeze on the margins available to independents on sales to residential customers.

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[1] Dual distribution occurs when suppliers operate at two or more levels and compete with their customers.

These complaints are similar to those relating to dual distribution in gasoline marketing. The overall question before the Commission is also the same — do the complaints reflect the normal operation of market forces, or do they indicate that more efficient distributors are being squeezed out by the refiners' control over supply?

A number of independent fuel oil resellers stated that their situation had improved in the early 1980s. The information on implicit independent margins obtained by the Commission confirms that their margins increased substantially after 1980 (see Appendix L, Tables 1 and 10). This in turn raises questions about the efficacy of competition at the retail level and whether there are correctable market imperfections which permit relatively high margins to persist over time at the expense of the consumer, especially during a period of declining demand.

In addition to expressing concern about possible refusals to supply and predatory price squeezes in the heating oil sector, the Director in his Green Book criticized the majors' use of restrictive covenants to limit the future activities of key employees. The nature of and justification for such restrictive covenants (e.g. to protect confidential customer lists) was explained in Imperial Oil's submission. In the view of the Commission, to the extent that such covenants might in particular cases go beyond reasonable commercial practice and raise public policy concerns, they are already adequately addressed by the general law regarding the enforceability of covenants in restraint of trade.

The acquisition of independents by refiners was raised in the Green Book and was pursued to some extent during the inquiry. The issue here, as in gasoline marketing, is whether these acquisitions result in a significant reduction in competition at the wholesale or retail levels.

At the conclusion of the inquiry the Director made no remedial recommendations applicable to the heating oil sector:

> Unlike motor fuels, heating oil, for example, is a product for which there are competitively priced substitutes — principally natural gas, electricity and wood. Moreover, consumers have been offered economic incentives to convert to energy substitutes creating further competitive pressure on the heating oil market. Finally, the heating oil market differs from the market for motor fuels in that the Director did not find that there has been the same misallocation of resources devoted to its distribution.

2. The Demand for Heating Oil

Unlike gasoline, heating oil, as a product, is and has been subject to highly effective competition from alternative energy sources in many geographic markets. Heating oil initially supplanted coal and wood and has in turn been increasingly replaced, in many markets, by electricity and natural gas. The shift from heating oil and other fuels (which may include No. 4 heavy fuel oil as well as light fuel oils) to electricity and natural gas since 1968 is shown in Table 1.

Table XVIII-1

Percentage Share of Canadian Homes Heated by Principal Energy Sources, Selected Years

	Oil or other liquid fuels	Natural Gas	Electricity	Other*
1968	59.5	28.8	2.8	8.4
1974	53.5	34.5	8.6	3.3
1979	41.5	37.6	18.1	2.7
1984	25.3	43.5	25.1	6.1

Note: * Other includes wood, coal, coke and other heating means.

Source: Statistics Canada, Catalogue No. 64-202.

The changeover from heating oils to electricity and natural gas has a highly concentrated regional impact. Heating oil sales have fallen in all parts of the country which have ready access to natural gas pipelines or relatively inexpensive electricity. Natural gas has been used almost exclusively in the Western Provinces for some time. The market effects of increases in relative prices of heating oils after 1972 were felt mainly in Ontario and Quebec as supplies of electricity were substantially increased and the natural gas pipeline was extended eastward in Quebec.

Table 2 provides light heating oil sales volumes in Eastern Canada from 1970 to 1984. In the case of gasoline, it will be recalled, sales first started to fall after 1980. For light heating oils, however, sales first started to decline noticeably after 1976. There was another dramatic drop in 1981 following the crude oil price jump of 1979/1980 and the Government's "off-oil" program initiated in 1980. Continued high fuel oil prices, federal government conversion subsidies, government sponsored advertising programs to encourage the use of alternative fuels, and subsidies for the extension of pipelines, resulted in a rapid expansion of the natural gas pipeline distribution system. While newly constructed residential, institutional or industrial and commercial buildings in Quebec and Ontario almost exclusively use electricity or natural gas, large numbers of existing households have also converted from heating oil to these energy sources. Refiners and other fuel oil distributors (i.e., independents) who testified in the inquiry reported rapidly declining markets, with many retailers being forced to leave the industry.

The Atlantic Provinces and parts of Ontario and Quebec are still not reached by the natural gas pipeline. Moreover, in spite of the fact that heating oil is more expensive than natural gas and electricity when measured in terms of energy content, it does not necessarily pay consumers to change from using heating oil. This depends on the cost of conversion and the quantities consumed. Thus, while fuel oil distribution is a declining industry, there are large numbers of consumers, even in those regions where natural gas and electricity are widely available, who continue to rely on fuel oil as a source of heat.

Table XVIII-2

Domestic Sales of Light Heating Oils
In Eastern Canada, 1970 to 1984
(millions of barrels)

	Ontario	Quebec	Atlantic Canada	Total Eastern Canada
1970	41.8	45.8	17.9	105.5
1971	43.7	42.8	19.2	105.7
1972	44.6	45.9	22.3	112.8
1973	40.7	45.2	21.4	107.3
1974	40.9	45.0	21.7	107.6
1975	37.2	44.4	19.6	101.2
1976	39.8	48.1	19.5	107.4
1977	35.2	40.9	18.0	94.1
1978	35.4	39.5	17.7	92.6
1979	33.7	37.6	16.2	87.5
1980	32.4	35.6	16.6	84.5
1981	25.9	29.5	14.1	69.5
1982	22.6	27.1	13.6	63.3
1983	17.1	22.4	11.6	51.1
1984	16.9	19.3	11.6	47.8

Note: 1. Light heating oils include kerosene and stove oil and Nos. 2 and 3 light fuel oils. For 1970 to 1972, some tractor fuel was also included.

Source: 1. For 1970 to 1982, see Statistics Canada, Catalogue No. 45-004, (December issues).

2. For 1983 to 1984, see Statistics Canada, Catalogue No. 57-003 (4th Quarter issues).

3. The Organization of Heating Oil Distribution

The principal features and changes in the organization and structure of heating oil markets are discussed in this section.

Imperial Oil, Petro-Canada and Texaco, who most fully described their systems of distribution, rely on agents to distribute their branded fuel oil in rural areas, and on employee-operated outlets in larger urban centres. In some rural areas Texaco also sells through Texaco-branded independents who set their own resale prices. As of 1984 Petro-Canada also had three wholly owned subsidiaries and minority interests in 16 other companies. Virtually all of these companies sold under the Petro-Canada brand. Imperial, Petro-Canada and Texaco, along with other refiners, also supply independents who in turn sell to consumers under their own brands.

Independents range from small retailers who pick up fuel oil at the refinery for resale to the residential market, to large resellers with storage terminal facilities who sell at wholesale as well as at retail. The largest independents in Ontario and Quebec are Sipco Oil Limited and Norco Oil Ltd. In 1982 these marketers had residential heating oil sales of 90.9 million and 61.4 million litres respectively which, based on sales of 4,500 litres per household, would represent about 20,000 and 14,000 households respectively.

Table XVIII-3

Changes in Private-Brand Heating Oil Retailers
in Quebec, 1977 to 1982

Disposition of Business	Number of Retailers Leaving the Market						Total	
	1977	1978	1979	1980	1981	1982	#	%
Closure*	8	18	34	30	16	12	118	28.0
Merger with another private-brand retailer	18	32	43	42	34	29	198	47.0
Acquisition by a major	18	12	20	22	18	16	106	25.1
TOTAL	44	62	97	94	68	57	422	100.1
Average annual sales of acquired or closed retailers (millions of litres)	2.6	1.8	4.0	2.7	1.8	2.4	2.8	

Notes: * It is not known whether or not, or to whom, the customer lists of the firms described as "closed" were sold.

**Percentage figures exceed 100.0 per cent due to rounding.

Source: Evidence of Imperial Oil, Exhibit M-451, page XVII-12.

Imperial Oil estimates that average sales in 1980 by independents in Quebec were 3.0 million litres while those in Ontario were 10 million litres.

Imperial estimated that an annual sales volume of 4.5 million litres was required for a viable independent operation. Although about half of Quebec's heating oil independents also distribute motor fuels, the average total refined petroleum product sales of approximately 85 per cent of these independents were still lower than 4.5 million litres in 1980. This estimate, which is undoubtedly subject to error and debate, was put forward by Imperial in support of its view that there is pressure on firms below 4.5 million litres of sales either to grow or to disappear, as demonstrated, they argued, by the average size of independents in Quebec who gave up their business, or were acquired or merged. The large number of independents with sales well below 4.5 million litres also suggests that the minimum viable size was much smaller at the beginning of the 1970s.

Estimates of the independents' market shares in Quebec and Ontario during 1977-1980 were prepared (see Table 4) from information submitted by Imperial Oil. Greater declines were experienced by independents in Quebec than in Ontario.

Table XVIII-4

Estimated Market Shares of Independents
Light Fuel Oil, 1977 to 1980
(%)

	1977	1978	1979	1980
Quebec	48.8	43.9	37.6	35.0
Ontario	n.a.	28.6	27.7	25.4

Notes and Sources: The volume figures for independents were obtained by multiplying the average annual sales and the number of independents given in Exhibit M-451, page XVII-17. The total industry domestic sales volume figures for light fuel oil (which includes Nos. 1, 2 and 3 fuel oils and kerosene) were taken from Statistics Canada, Catalogue Nos. 45-004 and 57-003.

As shown in Table 5, which provides different market coverage than Table 4, the independents continued to lose market share between 1981 and 1984. Most of the decline nationally occurred in 1984. Regionally, the sharpest declines in market shares were in Quebec and Atlantic Canada. In Ontario, market shares were more or less stable between 1981 and 1984. Additional gains and losses in the independents' market shares nationally and regionally may have been the result of the shifting of large independent accounts between the six refiners surveyed by EMR and other refiners (e.g., from Shell to Petro-Canada). Caveats to be taken into account in comparing Tables 4 and 5 are described in the notes to Table 5.

Table XVIII-5

Estimated Market Shares of Independents
Light Fuel Oil, 1981 to 1984
(%)

	1981	1982	1983	1984
Atlantic	16.1	13.3	10.0	10.1
Quebec	31.5	29.3	27.0	22.3
Ontario	30.2	28.6	29.6	28.1
Prairies	5.0	5.4	3.7	1.5
British Columbia	3.9	5.2	2.3	0.1
Canada	24.5	23.0	22.1	19.3

Notes and Sources: The estimates of independents' sale volumes and market shares were obtained from the Department of Energy, Mines and Resources (EMR). These figures represent the percentage of total refiner sales which were made through independents as opposed to directly to final consumers of all kinds. They are based on data reported to EMR by the four majors (Imperial, Shell, Gulf and Texaco), Suncor and Ultramar. The total sales of the six refiners', on average between 1981 and 1984, accounted for 74 per cent of total domestic sales of light heating oils and 70 and 84 per cent in Quebec and Ontario, respectively. Thus, whether the measured shares of the independents accurately reflect their true shares depends on whether the six refiners surveyed sold a greater or lesser part of their output to independents than did the other refiners (such as, Petrofina and BP which were acquired by Petro-Canada in 1981 and 1983). Given that Irving does not sell to independents, and that Imperial Oil and Suncor sell relatively large percentages of their output to independents, it is likely that the market shares of the independents are somewhat overstated, particularly in Atlantic Canada. The market shares of the independents are also affected by the extent to which they export or import product. Imports would not have been a factor during 1982.

4. Refiner Acquisition of Independents

Fuel oil distribution changed markedly after the early post-war years of burgeoning sales. Initially, although they also marketed through their own branded dealers and consignees, the refiners relied heavily on independents. In the 1950's the four majors were the chief suppliers in Ontario and Quebec. As the new refiners, Petrofina, BP and Ultramar,[2] became established in the Quebec market in the late 1950s and 1960s, competition for the business of independents grew. The newcomers, in need of outlets for their products, began to acquire independents who had until then been supplied by the majors.

The national majors have, over the years, also acquired a number of independents, although the effect of the acquisitions on market shares is uncertain because the size of most of the acquired firms is unknown. Shell acquired more than the others, acquiring between 1961 and 1976 a total of 163 dealers of whom 102 were in Ontario and 28 in Quebec. In addition,

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[2] In anticipation of its refinery opening in 1971, Ultramar developed an extensive wholesaling business in Quebec in the 1960s using imported product.

Canadian Fuel Marketers (CFM), which was acquired by Shell-U.K. in 1968 and sold to Ultramar in January 1979, took over a further 73 dealers. These acquisitions occurred both before and after CFM was acquired. At the time of its acquisition in 1968, CFM was the largest independent in Eastern Canada. Ultramar in 1969 acquired 50 per cent control over Neal Petroleum of Ontario, which had been the largest independent after CFM. In 1971, Ultramar obtained full ownership of Neal. Between 1961 and 1976 Gulf acquired 24 independents and Texaco 12, with Texaco's last acquisition occurring in 1971. Imperial Oil made 11 acquisitions between 1958 and 1973, and 48 between 1974 and 1981. Selling out one's firm or business in whole or in part to another independent or to a refiner has been an important means of exit for independents during a time of falling sales. Unless the number of firms declines when long term demand declines, higher average unit costs over the industry as a whole are a virtual certainty.

The large number of acquisitions by Imperial after 1974 occurred at a time when it was consolidating its agency network east of Manitoba. The number of agents was reduced from 408 in 1974 to 286 in 1980 and average sales per agency increased about 40 per cent in spite of falling industry sales.

Following enactment of the Foreign Investment Review Act in 1974, the rate of acquisition of medium-to-large sized independents slowed down considerably, except for the June 1979 to February 1980 period when the Government relaxed the rules. Some foreign-owned refiners (e.g. Petrofina and Ultramar) avoided the Foreign Investment Review Agency's review process by limiting their acquisitions to a minority ownership interest. These and other refiners also acquired firms with assets/sales below the FIRA review levels.

5. Pricing to Homes

There are two important differences between the way domestic consumers buy heating oil and the way they buy gasoline, that have fundamental market implications and lead to less price competition in heating oil. Firstly, price differences in gasoline are public and highly visible, whereas a heating oil customer must usually make the effort to phone around for comparative price information. As a result, there is a lower level of price consciousness. Secondly, consumers cannot avoid making frequent purchasing choices and decisions for gasoline, whereas with heating oil the supplier will ensure that the consumer's furnace does not run out during the season or even from year to year, without the consumer having to take any more initiative than pay the bills presented. The assurance of automatic, annual furnace maintenance and the availability of emergency service also make small price differences less significant.

Whether for the foregoing or for less apparent reasons, price differentials in gasoline, unlike those in heating oil, can result in large shifts in sales between outlets and on occasion, there is considerable price volatility. Prices are apparently used less to compete in heating fuel than in gasoline marketing, in spite of the presence of a significant number of heating oil resellers. Large heating oil suppliers have an established tankwagon price which they quote to customers. During periods of price competition temporary discounts off the tankwagon price are offered rather than the published tankwagon price being changed.

The infrequent shifting of distributors by residential heating oil customers means that sales for an entire heating season or longer can be affected by a single price quote. This should facilitate unadvertised price cutting, although there is little evidence as to the extent to which it occurs. The main form of price competition in the residential market appears to be discounts to buying groups. As far as can be determined, this competition is consumer-initiated, with certain groups such as credit unions bargaining on behalf of their members. Refiners indicated that such discounts reflect cost savings which arise from obtaining a large number of customers without the associated sales staff expense. In some cases consumers can obtain discounts through simple membership in one or another organization. Some independents considered discounts to consumer groups to be an objectionable form of competition from the majors. Like other discounts, however, they are merely a manifestation of normal market forces and can be granted by any supplier. There would nevertheless be a possible objection if the size of the discounts resulted in the refiners systematically earning lower net profit margins on retail than on wholesale sales, since one would expect higher returns on sales to independents to result in the prices they pay to be bid down. Although the size of retail discounts obtained from refiners is not in evidence, the size of the retail margins earned by independents on ordinary retail sales in recent years indicates that there was substantial room for discounting.

Independent resellers of heating oil testified that in part they attract customers by offering personalized service with respect to such things as the times they are willing to make deliveries, the notice they require before doing so, or the volumes they are willing to deliver. Residential sales probably represent over 70 per cent of resellers' heating oil sales.[3]

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[3] Residential sales in 1984 represented 62 per cent of Canadian heating oil sales, and 66 and 65 per cent in Quebec and Ontario respectively. Because of the increasing difficulty independents experienced after the mid-seventies in competing with refiners for sales to the commercial/industrial sector, residential sales have become increasingly more important to these non-integrated marketers.

6. Gross Margins Available to Independents

Independents have to compete for the residential or retail business with the same companies from whom they have to obtain their supplies. Both the Director and a number of independents told the Commission that major oil companies have "squeezed" the independents in an attempt to drive them out of business by not allowing a sufficiently large gap or margin between the refiner's selling price to independent resellers, and the prices the refiners charge when selling the same products directly to retail customers.

The Commission examined the gross margins available to independent resellers in selected Eastern Canadian markets[4] in response to their complaints, noted above, that their suppliers/competitors, the refiner/marketers, were setting wholesale/retail prices so as to squeeze them out of the residential heating oil business.

The results in tabular form, with an explanation of the data and methodology are set out in Appendices K and L. The annual gross margins are based on the average retail price of number two heating oil reported by Statistics Canada and on refiner realizations on sales to independents provided to the Commission. The monthly margins are based on price and realizations data provided to the Commission by the refiners.

Average, annual, gross margins in Montreal and Toronto from 1973 to 1982 are shown in Figures 1A and 1B. Considerable inflation during the period covered means that the margins measured in current dollars are only very roughly comparable over time. The margins measured in constant 1981 dollars allow much better comparisons over the entire period even though the index used is imperfect. Unless stated otherwise, the discussion of gross margins is based on inflation-adjusted figures.

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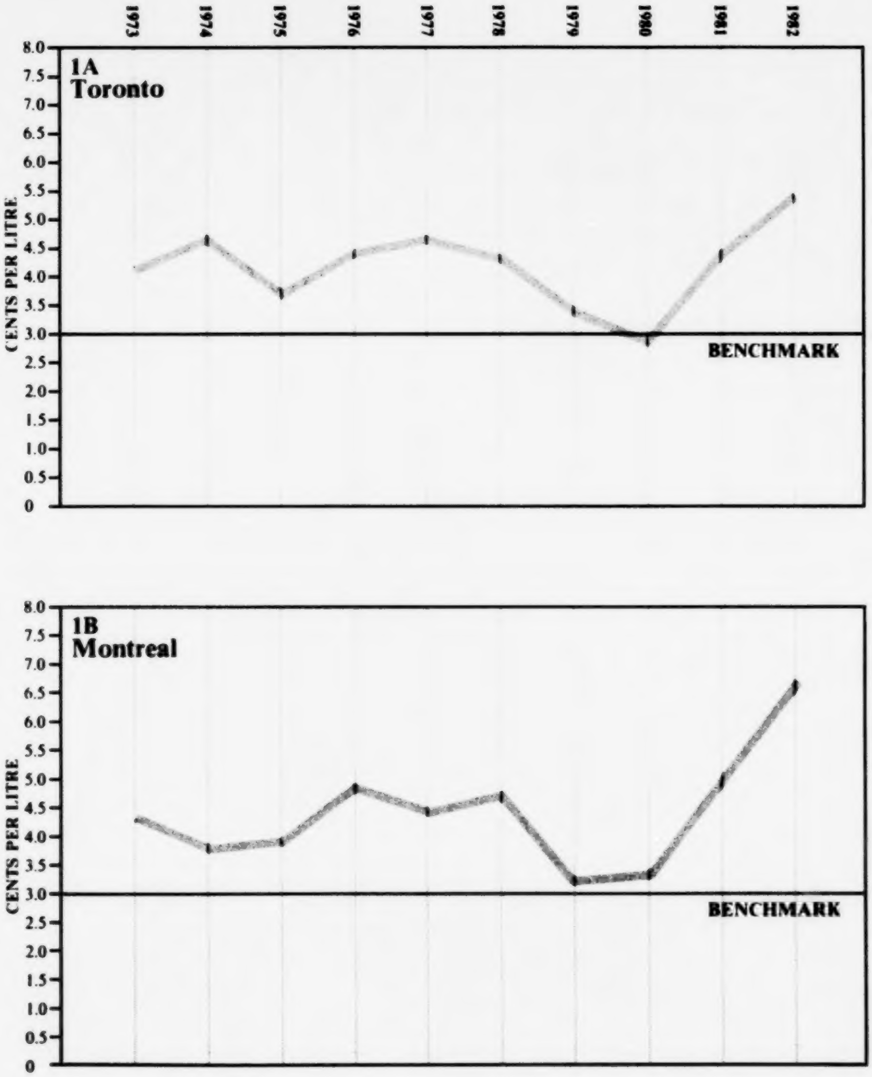
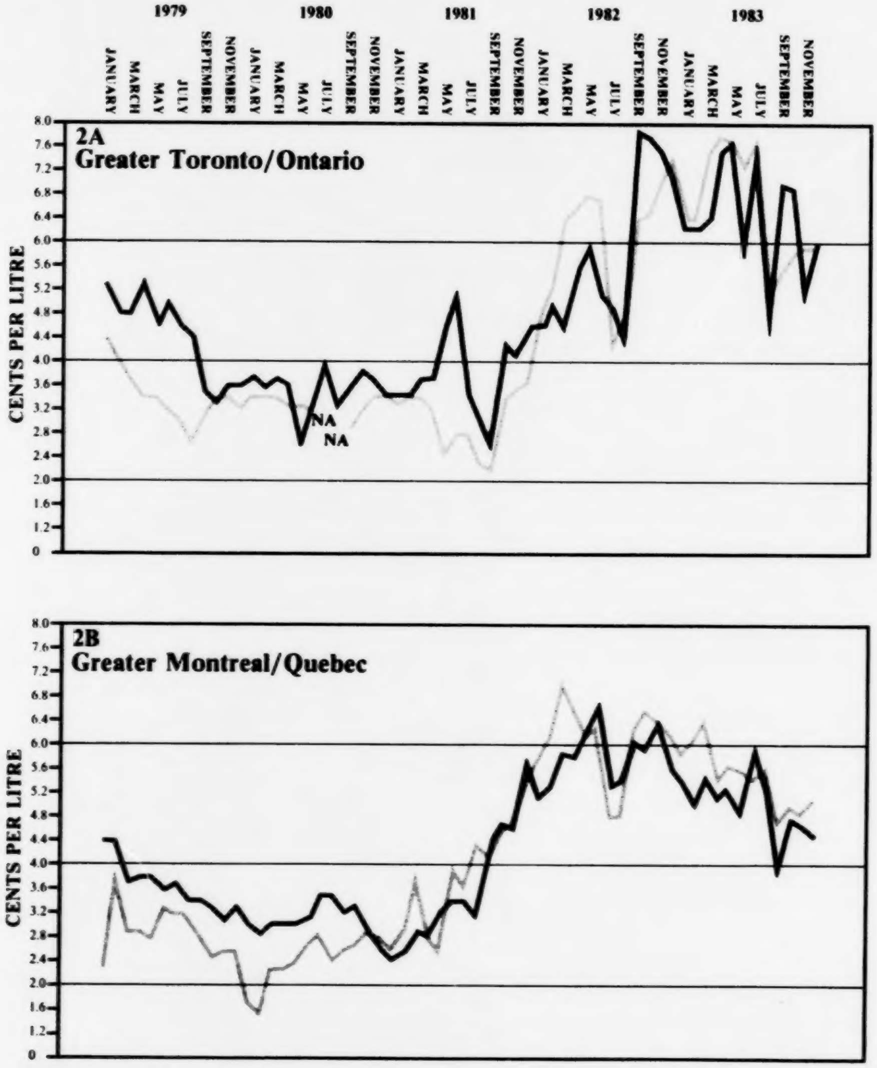
[4] Western Canadian independent gross margins were not examined because the complaints were from Eastern Canada. Natural gas has been the primary heating fuel in the West.

FIGURE XVIII-1.
Annual Gross Margins of Independent Heating Oil Distributors in Toronto and Montreal,
In Constant 1981 Cents Per Litre, 1973 to 1982.



Source: Appendix L, Table 1.

FIGURE XVIII-2.
Monthly Gross Margins (Based on Weighted Average Realizations Data) Available to the Two Smallest and Grouped Independent Distributors of Heating Oil, 1979 to 1983,
In Constant 1981 Cents Per Litre.



▤ GROUPED
▤ SMALLEST

Source: Appendix L. Table 10.

Figures 2A and 2B show gross margins based on monthly data for the years 1979 to 1983. The average margins of all independents and of the smallest independents included in the sample reported by refiners are shown separately.

The size of gross margins relates to the concerns expressed by the independents and the Director regarding possible predatory price squeezes by the majors. As discussed in Chapter XVI, predation is perhaps the most difficult area of competition policy. The difficulty lies in distinguishing between low prices resulting from normal competitive forces, and prices set deliberately low for the purpose of injuring a competitor in the expectation that higher prices can be charged in the future. The latter would be an abuse of market power. The evidence required for firm conclusions on whether or not there was predation was not placed before the Commission, perhaps because the purpose of a section 47 inquiry is not to determine whether or not criminal offences under section 34(1)(c) have occurred. The gross margin data were obtained in order to trace patterns over time and to see whether or not average margin levels and fluctuations indicate the possibility of a predatory squeeze, but ultimately some kind of cost test is required. Although the costs of the alleged predator are normally used when testing for predation, the availability of certain information regarding the costs of independents is also relevant in the assessment of predatory intent or effect.

In response to the tight supply situation in 1978/1979, the Federal Minister of Energy, Mines and Resources commissioned a study by officials of his department and private consultants, part of which consisted of an analysis of independents' costs. The study concluded that "efficient" independents could cover their costs and earn a normal profit with a margin of 3¢ per litre (converted to 1981 dollars). In the context in which it appears, the Commission interprets "efficient" to mean that the independents have a reasonable volume and take all reasonable steps to restrain their costs. The estimate is consistent with the testimony of Mr. S. Abracen, President of Norco Oil Ltd., the largest heating oil independent in Montreal. Mr. Abracen, although admittedly dealing with the subject in a general way, in November 1983, stated that he required a margin of 2.9¢ per litre (converted to 1981 dollars) to cover all his costs and earn a profit. While the Commission is very much aware of the variability of costs among suppliers, it nevertheless believes that these estimates provide a useful benchmark for assessing the gross margins data for the early 1980s. Possible cost standards cover a wide range. A standard requiring that all costs plus a return on capital be covered is the strictest cost test of predation. The cost estimates given above relate to this standard.

The gross margins available to independents over most periods indicate that unless the benchmark estimates given above are seriously deficient, there was no general price squeeze on independents. In fact, the average gross margins of 4.2¢/l. and 4.4¢/l, in constant 1981 dollars, in Toronto and Montreal, respectively, during 1973 to 1982, suggest that competition in sales to the household sector was far from severe.

There were periods during which gross margins fell below 3¢ per litre, with the smallest independents most affected. The evidence does not, however, allow any conclusions as to why margins shrank. Predation cannot be ruled out, but normal market forces might have easily produced the same result; occasional losses are to be anticipated in any line of business.

Based on annual data measured in 1981 constant dollars in Figures 1A and 1B, gross margins fell below 3¢ only in 1980 in Toronto and were otherwise comfortably above that level in both cities. In 1982 the margin rose above the level attained in any of the previous years.

Two underlying differences between Figures 1 and 2 probably explain why the results shown by them are not exactly the same even after allowing for the use of monthly averages in one case and annual averages in the other. Firstly, the average monthly gross margins in Figures 2A and 2B are based on realizations by a different set of refiners than in Figures 1A and 1B. Secondly, while the average annual realizations of the refiners on which Figures 1A and 1B are based, as well as the average monthly realizations used for the "grouped" reseller margins in Figures 2A and 2B, were derived from sales to all independents, the average realizations used for the smallest independent margins in Figures 2A and 2B are based on sales to only a few of the smallest independents.

The average, monthly, gross margins in Figures 2A and 2B for "grouped" independents show that there was only one period when the independents' margins might be described as "squeezed". This was in Montreal during November/December 1980 and the early part of 1981. The two isolated instances when gross margins fell below 3¢/l in Toronto stand out as exceptions. The use of the cost level for a single year deflated by a general price index does of course reduce the confidence that can be placed in comparisons over a period as long as 10 years. It is doubtful, however, that any conclusions would be changed by cost information over a longer period given the gap between margins and distribution costs.

The experience of the smallest independents, in contrast to that of the grouped independents in Figure 2B (re Montreal), was less pleasant.

Through the heating seasons of 1980 and 1981, gross margins were below 3¢/l with all of 1980 being particularly low. However, the fortunes of this group of independents, along with those of the others, showed considerable and continuous improvement from the fall of 1981 to the spring of 1983, when they declined slightly but remained high until the end of 1983.

In Toronto gross margins for the smallest independents were below 3¢/l for several consecutive months only once, from May through September 1981.[5] Sales during these off-season months would normally be low or non-existent and this would not have a significant impact on the independents' returns for the complete year. The difference between the fortunes of the smallest independents in Toronto and Montreal is similar to the experience of other size-classes of independents, in that the margins available to independents in Toronto during 1979-83 were generally higher than in Montreal.[6]

The smallest independents' annual volume of purchases from refiners was generally below 2.25 million litres per year. Such low-volume sales figures may represent a situation where the purchaser is buying from more than one supplier. The average size of independents in Quebec in particular, but in Ontario as well, however, allows for the possibility that the independents were buying from a single supplier. This indicates that independents in the smallest-size class face the double disadvantage of higher average costs, due to low sales volume, and higher costs of purchase than larger independents due to less bargaining power. These disadvantages along with declining demand have overcome the desire for independence and ingenuity in cost cutting of small firms, resulting, as seen earlier in Table 3, in a decline in the number of small distributors in Quebec.

Independents generally fare better during periods of easy product supply than they do when supplies are tight. Tight supply in Quebec in the winter of

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[5] It is possible that there was a similar occurrence between July and September 1980 but data were not available for all of these months.

[6] Excluding the off-season or non-heating months of May through August, the difference in the average monthly margins for grouped independents and smallest two independents in Toronto and Montreal (in current cents per litre) is as follows:

	1979	1980	1981	1982	1983
Toronto less Montreal					
Grouped	0.4	0.6	(0.1)	0.6	1.9
Smallest two	0.7	0.8	(0.7)	(0.1)	1.2

Source: Appendix L, Table 9.

1978/79 explains why margins in 1979 were low and in fact, the measured margins during this period were further reduced in many cases by stiffer-than-usual credit terms. Additionally, some independents and refiners incurred higher transportation costs in shipping product from neighboring provinces. It is less clear why margins were lower after 1979. While 1980 and the early part of 1981 appear somewhat anomalous in Quebec, there is no indication of a general price squeeze by refiners.

Experience with gross margins in 1982 and 1983 demonstrates that reductions in wholesale prices may not be passed on. In spite of the existence of numerous independents in Quebec and Ontario as a whole, most retail markets are best characterized as oligopolistic. Whether or not, and how quickly, cost changes are passed on in such markets are not easily predictable. However, high distributor margins in any market situation invite discounting and it is, therefore, not surprising that this has taken place to a limited extent with heating oil since the latter part of 1983.

7. Supply Problems in 1978/1979

The extent of the supply shortage during the heating season 1978/1979 and the steps that the refiners took to deal with it are described in detail in Appendix M. The federal Department of Energy, Mines and Resources has already examined the shortage period, but in view of the concern expressed by several witnesses, the Commission will review the central facts. The principal conclusions of EMR's analysis were that the tight supply situation resulted largely from a series of refinery breakdowns at a time of increased demand (brought about by a prolonged period of abnormally cold weather); that the export of light heating oil by Ultramar and several large resellers was pursuant to contracts they had entered into earlier; and that the supply situation was eased as a result of the movement of additional supplies into Quebec from Ontario and the Atlantic Provinces.

Shortages were reported by the EMR study to be temporary and localized rather than continuous and widespread. Several refiners were forced to put their customers (including independents) on quota while other refiners discontinued or reduced supply only to their independent customers. According to Mr. Servais of the Department of Energy and Resources, Quebec, no consumer went without heating oil during the crisis. However, some independents without firm contractual commitments had to obtain supply through a central clearing house system run by Mr. Servais or by picking up product from suppliers in Ontario. Without the role played by both the Federal and the Quebec Governments in assuring that independents received any surplus supplies held by refiners and other resellers, the impact on some of the independents would have been greater.

In response to complaints that their policies respecting supply to the independent sector were not equitable during this shortage period, Imperial Oil, Shell, Gulf and Texaco, provided figures[7] which showed that the percentage of their sales to independents rose, rather than fell, in early 1979. Ultramar was forced to decrease its independent business, as well as its own branded dealer sales, because of a crude oil supply shortage. Several heating oil distributors in Quebec complained about the manner in which some refiners (especially Petrofina) operated their supply allocation/quota system in 1978/1979. They testified that independents were not treated equally because Petrofina did not impose restrictions on its own branded heating oil dealers. In contrast, other refiners such as BP, allowed independents to borrow on their quotas for succeeding months in the critical February to April 1979 period.

8. Comparison of Refiners' Realizations on Sales to Commercial/Industrial Accounts and to Independents

The differences in net realizations of two refiners (Gulf and Shell) on sales to commercial/industrial (C/I) accounts and to independents in Eastern Canada are summarized in Table 6. The data sources, methodology and more complete tabular results are presented in Appendices K and L.

Table XVIII-6

Implicit Wholesale Margin Available to Independents for Sales of Heating Oil to the Commercial/Industrial Sector, 1973 to 1982, In Constant 1981 Cents Per Litre

Year	Quebec/Atlantic Canada	Ontario
1973	0.56	(0.65)
1974	0.67	0.93
1975	1.96	1.04
1976	1.95	0.67
1977	1.22	0.03
1978	1.20	(0.26)
1979	0.06	(0.43)
1980	1.66	0.15
1981	2.30	0.35
1982	2.31	0.02

Note: The inflation-adjusted C/I realizations data used for these calculations have been further adjusted to deduct 1.1 in constant 1981 cents per litre for delivery and marketing costs assumed to be included in C/I sector realizations.

Source: Table 2, Part C in Appendix L.

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[7] See Appendix M for the detailed figures provided by the refiners.

The purpose of the comparisons is to determine whether or not refiners have, over any lengthy period, charged lower prices, net of delivery cost, to commercial/industrial customers than to independents. There is, of course, no law against charging one customer a lower price than another if the two are not in competition. There would, however, be reason to question the functioning of markets if the net returns from one set of customers were persistently higher than that from other customers. One would generally expect higher net returns from any class of customers to be competed away. Persistently higher net returns from a group of customer/competitors, than from other customers, should therefore be scrutinized for an explanation.

Several points made by refiners must be taken into account in interpreting the results. The commercial/industrial market generally buys on minimum one year contracts with either a firm discount or a firm price subject to escalation for increases in crude oil costs or taxes.[8] Therefore only new or recently renewed contracts would reflect current market prices. On the other hand, it was the refiners' experience that independents have been historically reluctant to enter into long-term contracts because they prefer the flexibility to "shop around". As a result, rising and falling prices (or realizations) would be reflected noticeably sooner in the independent market than in the C/I market as a whole. It was also stated that, from time to time, competition drives down the realizations from C/I sector business to marginal levels for the refiner and at such times the independents also could only expect a marginal return on C/I sector business.

The breadth of the C/I customer class and the broad geographic areas covered by the data also invite caution.

Turning to Table 6, the difference in realizations on sales to C/I customers and to independents in Ontario indicates that there has been very little, or a negative, margin available to independents wishing to sell to C/I customers. These results contrast with those in Quebec/Atlantic Canada. Save for three years, the average realization on sales to independents in these provinces was at least 1.2 cents per litre below those from C/I customers. The small difference observed in 1979 is supported by the EMR task force study noted above which found that five Quebec refiners had C/I realizations below independent realizations in February 1979.

These results are also in contrast to, but not necessarily inconsistent with, the evidence submitted by independents to the effect that refiners had submitted bids for C/I accounts which resulted in a lower realization to them

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[8] Some C/I sector contracts range up to 5 years, but the discount or the price would be renegotiated annually.

(sometimes *before* allowing for transportation costs) than they realized on sales to independents. While Table 6 suggests that this was a more frequent occurrence in Ontario than in Quebec/Atlantic Canada, average realizations from C/I customers were about the same as from independents.

9. Summary and Conclusions

1. The sharp decline in heating oil sales has had a very significant impact on heating oil distributors, resulting in an ongoing reduction in their numbers through departures, acquisitions and mergers. While natural gas and electricity will continue to attract customers from heating oil, these cheaper alternative energy sources do not guarantee competitive conditions in heating oil distribution as indicated by unusually high retail margins in recent years.
2. While there is evidence that the available margins to the smallest independents in Montreal have been low during a number of years because the prices charged to them were above those paid by their larger competitors, margins to the average independent were generally above his costs of distribution.
3. In the view of the Commission, no specific recommendations are called for with respect to the heating oil sector. However, the concerns of independents with respect to the availability of supplies on reasonable terms and protection against price squeezes do have to be addressed in a broader context and are taken up in the conclusions and recommendations of the Report.
4. The characteristics of the heating oil market with respect to the lack of readily available information on prices and the tendency of consumers to settle on a supplier for at least the duration of a heating season requires consumers to shop actively in order to get the best value for their money.

XIX

Supply Adjustment in the Refining Industry in Quebec

1. Introduction

On January 13, 1986 the Minister of Consumer and Corporate Affairs wrote to the Commission requesting that it consider in its Report on the petroleum industry "the balance of supply and demand in the market for gasoline and other refined petroleum products which confronts Quebec-based refineries". This matter can most usefully be addressed, in the Commission's view, by first tracing the forces shaping changes in both the demand for the output from Quebec refineries and in their supply capabilities. Before turning to this review, the Commission would like to comment on several submissions it has received addressing the Minister's request.

Submissions were received from the Department of Energy, Mines and Resources (EMR) and from the Director of Investigation and Research. The submission from EMR is not relevant to the issue since it dealt solely with demand in Quebec and was related to the question of security of supply. Submissions were also received from Imperial Oil, Shell and Texaco, all of which were highly critical of the Director's approach to measuring demand for the output of Quebec's refineries because it ignored product imports and shipments from other provinces. The Commission agrees with this criticism. All of the submissions received stressed the need to treat Quebec as part of larger and, some would add, changing geographic markets. The submissions by the oil companies particularly stressed the importance of import competition in assessing the effect of the closure of Gulf's Montreal refinery. Import competition is discussed in a more general context in Chapter XI.

The movement of product into and out of geographic regions is due in part to the obvious fact that political and market boundaries are not synonymous. Additionally, and allied with the fact that petroleum products can be and are transported long distances by pipeline and water transport, is the consideration that refining supply and demand originate to a significant degree with different firms. Firms requiring supply may find it less expensive to ship in product manufactured or acquired by them elsewhere rather than to purchase it from a supplier in the province. For example, how Texaco or Imperial Oil meet their supply needs in Montreal may be little influenced by whether or not Ultramar has excess capacity at St-Romuald. It is only during times of supply crisis that it may be meaningful to compare global supply and demand in a region, since at such times the normal operation of market forces has to be suspended or modified. Even then logistical considerations rather than provincial boundaries would be the critical factor in how demands were met.

2. Reductions in Sales of Petroleum Products

In the Commission's view, the principal background consideration in assessing the current supply-and-demand situation in Quebec and in the areas with which it interacts, is the decline in sales of petroleum products. Although this factor has often been stressed in the many published views and assessments of refinery closures in Quebec, its importance needs reiteration: firstly, because it is difficult to appreciate fully the magnitude of the decline, and secondly, because the decline in sales created effects in the form of refinery closures that fed back to and further reduced wholesale demand in Quebec. Four refineries have been closed in Montreal, three in 1983 and one in late 1985.

Between 1979 and the end of 1985, sales of all petroleum products in Quebec fell by 39 per cent, in the Atlantic Provinces by 30 per cent, and in Ontario by 21 per cent. Most of these declines occurred between 1979 and 1983. The refining industry, and particularly the refining industry in Quebec, has suffered a decline in sales, the significance of which can best be appreciated by comparison with the great depression of the 1930s when real gross national product fell about one third between 1929 and 1933. Moreover, there are likely to be further, smaller declines in petroleum product sales in Quebec. The differences in the declines in sales in the Atlantic Provinces, Quebec and Ontario are explained by inter-regional differences in the composition of product sales and the opportunities for substitution that developed. The Atlantic Provinces and Quebec in the mid-1970s were both heavily reliant on heavy and light fuel oils for heating and industrial power. In comparison, consumption of these products was lower in Ontario, already extensively served by natural gas pipelines. Partly as a result of market forces and partly due to government policies, crude oil prices rose more quickly than natural gas and electricity prices, particularly in Ontario and Quebec. (Both greatly expanded their electricity-generating capacity.) These price differentials, the promotion of alternatives to petroleum product use by the Federal Government through incentives to consumers for furnace conversion, and the eastward extension of the natural gas pipeline in Quebec opened the way in Quebec to a massive substitution of natural gas and electricity against light and heavy fuel oils. The opportunities for substitution were less in the Atlantic Provinces and the need was less pronounced in Ontario. Additionally, in November 1981, Quebec considerably increased gasoline taxes. This undoubtedly contributed to a greater decline in gasoline sales there than occurred in other provinces.

Total sales of refined petroleum products in the Atlantic Provinces, Quebec and Ontario for 1974 to 1985 are shown in Table 1, and the sales of light and heavy fuel oils and gasoline in Quebec for the same period are shown in Table 2.

Table XIX-1

Total Sales of Petroleum Products in Eastern Canada, 1974-1985
(Thousands of Barrels)

Year	Atlantic Provinces	Quebec	Ontario
1974	81,938	174,703	186,643
1975	78,614	170,167	181,302
1976	79,942	177,658	191,955
1977	78,954	172,277	195,620
1978	82,601	170,207	201,634
1979	83,283	175,291	207,866
1980	83,214	170,483	195,964
1981	70,145	154,312	184,820
1982	65,568	133,463	163,671
1983	56,794	119,828	158,984
1984	59,015	114,681	163,367
1985	58,560	107,648	166,183

Source: Statistics Canada, Catalogue No. 45-004.

The decline in annual sales in Quebec between 1979 and 1985 totalled 67,643,000 barrels. The largest absolute (26,000,000 barrels) and relative (68 per cent) decline in sales occurred in heavy fuel oil. Gasoline sales fell by 12,639,000 barrels or 23 per cent, and light heating oil by 20,173,000 barrels or 54 per cent. Sales of light fuel oil in 1979 were already lower than they had been in the early 1970s.

The decline in total annual sales translates, by simple division, into approximately 185,000 barrels per calendar day of refining capacity. Assuming that the 185,000 barrels per day would have been produced in refineries operating at 85 per cent capacity, which is close to the historical

Table XIX-2

Sales of Principal Petroleum Products in Quebec, 1974-1985 (Thousands of Barrels)

Year	Light Fuel Oil*	Heavy Fuel Oil	Gasoline
1974	44,960	42,902	49,717
1975	44,385	38,845	52,901
1976	48,077	39,261	54,240
1977	40,449	37,360	53,641
1978	39,453	33,776	54,562
1979	37,551	38,366	55,190
1980	35,555	36,823	54,640
1981	29,508	32,399	51,354
1982	27,114	27,120	44,574
1983	22,387	20,929	42,676
1984	19,282	17,400	42,509
1985	17,378	12,366	42,551

* Includes kerosene.

Source: Statistics Canada, Catalogue No. 45-004.

average, the decline in Quebec sales represents a decline in required capacity of 218,000 barrels per day. The combined capacity of the Texaco, BP and Imperial Oil refineries that closed in 1983 was 229,000 barrels per day. To the extent that the decline in sales was skewed towards light and heavy fuel oils, a somewhat smaller decline in capacity would have been necessitated if the surviving refineries had not had upgrading equipment added that allowed them to increase their capacity to produce the new lighter product mix out of existing distillation capacity. However, Ultramar in St-Romuald and Petro-Canada and Shell in Montreal have added or will be adding upgrading equipment that will allow a higher proportion of light products to be produced.

It is perhaps convenient to state at this time the Commission's first conclusion in this review, which is that the decline in Quebec sales made the closure of Montreal refineries in 1983 a virtual necessity. The closures themselves produced a secondary effect, namely a further decline in total sales from Quebec refineries unrelated to the decline in total demand from Quebec. This secondary effect is due not only to a reduction of capacity but to the removal of the refining presence of important firms such as Imperial Oil and Texaco. This has a dampening effect on shipment from Quebec to other regions and increases shipments into Quebec to meet the needs of these firms, even though the major part of their requirements is met through supply agreements with other Quebec refiners. This second conclusion is explored below through an examination of the interprovincial and international movement of product.

3. Interprovincial and International Movement of Product

As shown in Table 3, over the years there has been substantial interprovincial movement of refined petroleum products in Eastern Canada. In the mid-1970s, Ontario was a large net receiver of product, a position that was modified as the capacity of Ontario refineries was expanded. Quebec was both a substantial supplier to other provinces as well as a recipient. The year 1979, it should be noted, was anomalous because several accidents reduced Quebec's refinery capacity for a time. Some of the difficulties appear to have also affected interprovincial movements into and out of the province in 1980. The Atlantic Provinces, like Quebec, were involved in a large two-way interprovincial movement of product during the early years, as shown in Table 3, but the volumes were greatly reduced by 1979. The Atlantic Provinces went from being a net shipper to being a net recipient in 1981. This is probably explained by the closure of Gulf's Point Tupper refinery in Nova Scotia in late 1980.

Prior to the Montreal refinery closures in 1983, Quebec was a net shipper in interprovincial product movements of over 10 million barrels of product per year. The net outflow fell to roughly five million in 1984 and 1985. There were corresponding changes in the opposite direction in Ontario and the Atlantic Provinces. The more striking change, however, was in Quebec's imports, shown in Table 4, which increased in each of the years from 1983 to 1985. These changes in the net international trade balance and in net interprovincial product movements, which are probably the result of the refinery closures, represent a further reduction in the demand for the output of Quebec refineries over and above the decline in sales in that province. It can thus be seen that there is little point in trying to measure refining capacity in Quebec against sales in Quebec, with or without the addition of sales into the Ottawa Valley.

4. Ultramar's Acquisition of Gulf's Eastern Downstream Assets

There is one final matter to be addressed with respect to the supply and demand picture for Quebec refineries, namely the sale of Gulf's Montreal refinery and marketing outlets in Quebec and the Atlantic Provinces. This acquisition has been approved by the Federal Government on broad public-policy grounds which go beyond the public-interest criteria considered by the Commission. Furthermore, even with respect to competition criteria, the Commission is not in a position to express other than very tentative views on

Table XIX-3

Interprovincial Movement of Petroleum Products, 1974-1985 (Thousands of Barrels)

Year		Atlantic Provinces	Quebec	Ontario	Total*
1974	In	17,179	17,477	32,044	66,700
	Out	28,991	32,798	3,435	65,224
1975	In	19,441	22,805	36,581	78,827
	Out	34,066	37,981	4,433	76,480
1976	In	31,940	17,279	33,697	82,916
	Out	39,730	36,075	4,870	80,675
1977	In	19,546	16,716	35,164	71,426
	Out	27,320	37,600	3,971	68,891
1978	In	9,640	14,905	31,064	55,609
	Out	12,288	35,549	5,347	53,184
1979	In	6,411	23,519	22,539	52,469
	Out	12,011	24,090	11,984	48,085
1980	In	8,661	20,274	21,774	50,709
	Out	9,512	24,883	12,901	47,296
1981	In	14,517	18,428	20,346	53,291
	Out	9,943	28,857	11,913	50,713
1982	In	9,225	15,085	20,059	44,369
	Out	4,310	28,008	10,874	43,192
1983	In	8,330	20,567	24,425	53,322
	Out	4,504	28,308	17,646	50,458
1984	In	8,267	17,654	18,818	44,739
	Out	6,915	21,810	12,398	41,123
1985	In	4,649	19,278	21,491	45,418
	Out	4,604	23,406	13,822	41,832

* The small difference between the combined movement of product into and out of the Atlantic Provinces, Ontario and Quebec indicates, as one would expect, that there was very little movement of product between this area and Western Canada.

Source: Statistics Canada, Catalogue No. 45-004.

Table XIX-4

Quebec Exports and Imports of Petroleum Products, 1974-1985
(Thousands of Barrels)

Year	Exports	Imports
1974	3,621	14,455
1975	6,139	9,101
1976	8,517	7,658
1977	10,493	13,476
1978	10,774	11,589
1979	2,080	3,418
1980	3,898	4,887
1981	5,928	4,336
1982	8,083	3,277
1983	6,058	7,830
1984	8,409	15,922
1985	8,889	14,856

Source: Statistics Canada, Catalogue No. 45-004.

the acquisition since it has not heard evidence which might allow it to reach a judgement.

The most easily perceived facts — the small number of refiners and fairly tight capacity — indicate that the acquisition raises competition policy concerns, but there are other facts important to the analysis that are unknown to the Commission. Could another buyer be found for the Gulf refinery given the fact that, as described in Chapter X, its processing agreement for Texaco had been previously assigned to Petro-Canada? It is clear that without all or a substantial part of the volume associated with the processing agreement, any potential operator of the refinery would have to reach far afield for sufficient sales to keep the refinery operating at a reasonably high level of capacity. Would retention of the processing agreement have made a significant difference to Gulf's ability to find a buyer? If the answer to either of these questions is yes, then how would the price that other buyers might have been willing to pay compare with that available from Ultramar?

One of the questions that any deciding body must face in any merger evaluation is the extent to which it is willing to prevent a seller from getting the highest price for its assets when an acquisition raises competition policy concerns. Generally a buyer who stands to benefit from higher market prices will be willing to pay more than one who will not. Other questions concern the effect of the acquisition on Ultramar. Was it a viable firm without the acquisition? Is the acquisition likely to make Ultramar a more effective competitor? In the event that the answer to the foregoing questions led to the judgement that the acquisition had or was likely to result in a substantial reduction in competition, probably leading to higher wholesale prices and narrower margins for independents and to higher prices for consumers, would these negative effects be offset by cost savings associated with the closure of the Gulf refinery?

For reasons already discussed, the Commission does not consider that it would be particularly useful to try to evaluate the sale of the Gulf refinery and its closure on the basis of whether there is "enough" remaining capacity in Quebec. The competitive and efficiency effects of refinery closures can only be evaluated in relation to all the markets affected. While the greatest effects are usually felt in the area closest to the refinery, they may extend well beyond. Shipments from Montreal and Ontario refineries interface in Eastern Ontario, but the competitive pressures feed back to other areas in Ontario. There are similar competitive feedbacks in Eastern Quebec and Northern New Brunswick where shipments from the Irving and Ultramar refineries intersect.

5. The Government's Role in Merger Policy

Finally, government approval of the acquisition of Gulf's downstream assets east of Ontario by Ultramar as being likely to be of net benefit to Canada, and similar approval of Petro-Canada's acquisition of Gulf's downstream assets west of Quebec, raise a question concerning the merger provisions in Bill C-91. It is possible that both acquisitions would have been taken before the proposed Competition Tribunal if the provisions of the Bill had been in effect at the time of the acquisitions. This means that acquisitions considered to be in the overall public interest by the Government might have been prohibited by a decision-making body using narrower public interest criteria than those used by the Government. Concerns about the independence of the judiciary that could arise if the Cabinet were given power to override a judicial decision would not arise if Cabinet approval or exemption were made possible before a case was brought before the Tribunal. Although there is a cost in terms of the loss of a thorough and open assessment of competition policy concerns, it may be assumed that government intervention would only take place when there were other clear and persuasive public interest reasons for an acquisition to go ahead. It would, of course, be desirable for the Government to state its reasons whenever it gave such approval.

6. Conclusions

1. The relatively large decline in petroleum product demand in Quebec in the early 1980s made the closure of Montreal refineries that occurred in 1983 a virtual necessity. Furthermore, the closures themselves produced a secondary effect, namely a further decline in total sales from Quebec refineries to areas inside and outside the province resulting from the fact that the vertically integrated firms who closed their refineries supplied part of their requirements for the Quebec region from their refineries elsewhere. This secondary effect created pressure to close additional refinery capacity.

2. The sale and closure of Gulf's Montreal refinery cannot usefully be evaluated on the basis of whether there was "enough" remaining capacity in Quebec, in view of the ready movement of product regionally and internationally. No one suggests that it gave rise to security of supply concerns. The principal relevant questions relate to the effects of the closure on competition in Quebec and surrounding areas (principally New Brunswick and Ontario). By reducing surplus capacity the closure no doubt diminished competitive pressures in those areas, but the Government of Canada, by approving Petro-Canada's acquisition of Gulf's Texaco processing contract and subsequently Ultramar's acquisition of Gulf assets determined that on balance those transactions were in the overall public interest.

XX

The Duty To Supply

1. The Problem

The magnitude of investment required for refineries, for large terminals and for pipelines is such that, when taken with Canada's small and geographically dispersed population, only a few such facilities are possible if reasonable economies of scale are to be achieved. This leads to inevitable market power, or "monopoly" power, over supply in important respects.

The situation is aggravated by the extent to which vertical integration pervades the downstream sector. All refiners except Petrosar and Federated Co-operatives engage in dual distribution and compete at retail with their independent customers. This dual distribution characteristic raises the risk, and certainly gives rise to apprehension on the part of at least some independents, that refiners may at times make supply decisions that discriminate against a buyer on the basis of the buyer's actual, probable or possible resale or distribution practices, or on the basis of his affiliations or lack thereof. The discrimination could take any of a number of forms such as price, quantity limitations, delivery or pick-up restrictions, or other collateral terms. The apprehension of discrimination is itself a more important market fact than whether or not discrimination has ever actually occurred, because it is the apprehension of future supply difficulties that dampens a pricing or other distribution initiative.

From time to time in this inquiry concerns were expressed by independents about the extent to which they could count on continuous supply that would give them a fair opportunity to compete with their suppliers.

The problem could arise in a variety of ways. As to access to product, for example, two or three major refiners openly followed policies of restricted supply to independents in the 1960s. Irving Oil has always had such a policy and at the present time appears to be the only Canadian refiner following such a practice. It is difficult to see how the refusal or reluctance of such large refiners to make supply available could fail to affect the ability of independents to enter and grow and therefore to affect competition in the distribution sector, including the range of offerings available to consumers.

The problem could also take the form of a refiner who was not willing to process crude oil for a customer who proposed to distribute the products in local markets.

Questions of non-discriminatory access and price so far as pipelines are concerned are now subject to the supervision of the National Energy Board and other regulatory authorities, so the Commission's concerns do not extend to pipelines. They do, however, in addition to refineries, extend to the availability of terminal capacity because of the growing importance of the product import option.

Even apart from the fact that Irving Oil Limited, for example, has sought and received regular benefits and support from federal and provincial government policies, it seems to be clearly contrary to the public interest for a refiner in Canada to refuse to supply independents as a matter of policy. But beyond that type of problem, any apprehension on the part of unintegrated independents that their supply or the terms thereof might be affected by the nature of their marketing initiatives should be minimized to such extent as is reasonably possible consistent with the long run goals of market economies.

2. The Options

In attempting to remedy any perceived deficiency in the market a balance must be found between the extent of the problem, the disruption or cost of the proposed solution, and the extent to which it is likely to be effective.

It is obviously not in the public interest, for example, for consumers to have to support the enormous cost of multiple facilities and surplus capacity that would be necessary to reduce the existing market power of refiners in that way.

Nor, for reasons stated elsewhere, does the Commission consider it advisable to recommend elimination of vertical integration in the industry by divestiture, or its significant reduction by means of divorcement or the prohibition of exclusive dealing arrangements, all of which have been urged upon the Commission by one or more participants in the proceedings.

In the Commission's view the preferred focus of public policy in this critical area of concern over supply is to seek to avoid unreasonable anti-competitive effects resulting from the way or the terms upon which the owners of scarce facilities, notably refineries and large terminals, make their capacity available to others. If the market power and vertical integration are to be left in place, in order to facilitate possible economies, care must be taken to ensure that the power is not misused.

In the Commission's view it is therefore important that the scope of the duty to supply on the part of someone possessing a high degree of market power be defined as precisely as possible, and that a mechanism exist by which the principles can be applied in a fair but timely way.

3. Scope of the Duty to Supply

Freedom of contract, including the freedom to enter into or not to enter into such contracts as one wishes for one's own reasons, is a cherished commercial freedom. Public policy only limits it to the extent that some other public interest is considered paramount. One set of limitations is expressed in the Combines Investigation Act, where certain types of agreements are prohibited by statute and others are subject to being prohibited if, on examination of the particular context in which they occur, they are found to lessen competition substantially or be likely to do so.

Public policy is, further, more reluctant to say that someone *must* enter into certain types of contracts than it is to say he must *not* do so. Section 31.2 of the current Act, however, which has applied since 1976, is such a provision. It recognizes the vital role of supply in the health of markets:

> 31.2(1) Where, on application by the Director, and after affording every supplier against whom an order is sought a reasonable opportunity to be heard, the Commission finds that
>
> (a) a person is substantially affected in his business or is precluded from carrying on business due to his inability to obtain adequate supplies of a product anywhere in a market on usual trade terms,
>
> (b) the person referred to in paragraph (a) is unable to obtain adequate supplies of the product because of insufficient competition among suppliers of the product in the market,
>
> (c) the person referred to in paragraph (a) is willing and able to meet the usual trade terms of the supplier or suppliers of such product, and
>
> (d) the product is in ample supply,
>
> the Commission may,
>
> (e) where the product is an article, recommend to the Minister of Finance that any duties of customs on the article be removed, reduced or remitted with respect to the person to the extent necessary to place him on an equal footing with other persons who are able to obtain adequate supplies of the article in Canada, and
>
> (f) order that one or more suppliers of the product in the market, who have been afforded a reasonable opportunity to be heard, accept the person as a customer within a specified time on usual trade terms unless, within the

> specified time, in the case of an article, any duties of customs on the article are removed, reduced or remitted and the effect of such removal, reduction or remission is to place the person on an equal footing with other persons who are able to obtain adequate supplies of the article in Canada.
>
> (2) For the purposes of this section, an article is not a separate product in a market only because it is differentiated from other articles in its class by a trade mark, proprietary name or the like, unless the article so differentiated occupies such a dominant position in that market as to substantially affect the ability of a person to carry on business in that class of articles unless he has access to the article so differentiated.
>
> (3) For the purposes of this section, the expression "trade terms" means terms in respect of payment, units of purchase and reasonable technical and servicing requirements.

Many independents in this inquiry, and the Director, urged the Commission to recommend that interim supply orders be made possible under section 31.2 to avoid irreparable harm to aspiring customers while applications under the section were being considered. To be meaningful the relief must be timely. Neither the refiners nor anyone else stated any objection to such a provision and the Commission makes such a recommendation. In doing so, it notes with satisfaction that Bill C-91 proposes that a comprehensive power to grant interim orders exist for all matters within the proposed new Part VII jurisdiction of the Competition Tribunal.

A question remains about the adequacy of section 31.2 (to be renumbered as section 47 under Bill C-91). Relief under the section is only possible where a potential customer is shown to be "substantially affected" or "precluded from carrying on business" by his inability to get "adequate supplies . . . anywhere in a market on usual trade terms"; where that inability is shown to be due to "insufficient competition among suppliers"; and where the product is in "ample supply". The person who is hurting has no right to apply directly to the Commission (or Competition Tribunal) himself for relief, but can only complain to the Director and hope the Director moves promptly and perceptively. Nor can he obtain compensation for past harm. Further, there is considerable doubt about the power to grant a supply order if, even while the application is being heard, a supplier commences providing "adequate supplies".

A refusal to supply only has competitive significance where the "supplier" has market power and where the market in which the aspiring customer functions also suffers imperfections. The Combines Investigation Act deals with refusals to supply in several specific contexts (e.g., exclusive dealing, tied selling, market restriction, section 31.2, and where the refusal is in aid of an illegal restraint such as price maintenance or a conspiracy to lessen competition unduly), but apart from those provisions the law provides very little guidance to businessmen where a person is the sole, or one of the few, sources of supply. The monopoly prohibition under the Combines Investigation Act says only that one or more persons who substantially control a class or species of business in an area of Canada must not operate their business "to the detriment or against the interest of the public, whether consumers, producers or others". Where is the proper balance between a person's freedom to administer his own business and investment as he wishes, and an unacceptable prejudice to the functioning of markets that are dependent on supply of that type of product? Put another way, what is the proper scope of a duty to supply?

Questions of access to capacity cannot be divorced from questions of price and other terms of supply. If the terms of supply do not permit the customer to compete he will not take the product or service even though in form it is offered to him. This of course is the reason for the references to "usual trade terms" in section 31.2.

One of the clearer statements regarding the duty to supply on the part of someone who exercises a high degree of market power is that of Mr. Justice Gibson of the Federal Court of Canada, made in his capacity as Commissioner in the *Report of the Commission of Inquiry into Certain Allegations Concerning Commercial Practices of the Canadian Dairy Commission* (Government of Canada, 1981) at page 98:

> The common law imposed duties upon public utilities, who typically occupy monopoly position, to serve everyone who requests service on a non-discriminatory basis as to access and price, and to provide reasonable service at a reasonable price. These duties reflect what I understand to be the fundamental duty of a monopolist, namely, that he must not act in such a way as to exclude others, without reasonable justification, from the subject matter under his control or power. In this regard, the views expressed by Stark, J. in *R. v. Electric Reduction Co. of Canada Ltd.* (1970), 61 C.P.R. 235 at 236-237 are apposite:
>
>> "... it must be clear to any businessman or business company which finds itself in a monopolistic situation that in that case especially strict standards of conduct are required and must be met by any such business, and they are not entitled to protect and preserve that monopolistic situation by unfair means ..."

Bill C-91 contains some provisions that elaborate the duty to supply somewhat, but they are not broad enough to meet the types of problems being addressed here by the Commission. For example, a new so-called "delivered pricing" provision would permit the Tribunal to prohibit one or more suppliers from continuing a practice of refusing to deliver product to some customers from a given location from which they supply others, merely by reason of the location of the first customer's business. Also, if Bill C-91 is enacted, a more general power will exist under section 51 to prohibit harmful conduct by someone with significant market power, including refusals to supply, but only where the conduct meets four conditions:

(1) it must be a *practice* of engaging in "anti-competitive acts",

(2) each constituent act making up the practice appears to require an exclusionary or other harmful *purpose* in order to be "anti-competitive" within the meaning of the provision,

(3) the *object of the practice* must be to lessen competition, and

(4) the actual or likely *effect of the practice* must be the preventing or lessening of competition substantially in a market.

It has been said that a denial of supply is the ultimate predatory weapon, but in the Commission's view serious damage can also be done to markets by arbitrary refusals to supply, whether direct or indirect, that cannot be proved to have been motivated by an exclusionary or harmful purpose, or that are not part of a practice the object of which is to lessen competition, or indeed that may not be part of a "practice" at all. In the Commission's view power over supply, particularly in markets characterized by pervasive vertical integration, carries with it a responsibility not to refuse supply unless there is a legitimate business reason for doing so, or what the United States Supreme Court has referred to as an "efficiency justification". Arbitrary refusals to supply in such circumstances inhibit entry and expansion and dampen market forces at the reseller level. The public suffers, although not necessarily in any predictable or measurable way, as a result of the unreasonable reduction of pressures upon firms in the market to strive continuously to give consumers whatever they may want or whatever they may be attracted to, at all times, in the best, fastest and cheapest way.

The courts in the United States have developed a set of principles in connection with section 2 of the Sherman Act, known as the "essential facilities" or "bottleneck" doctrine, which define more precisely the duty to supply on the part of one or more firms who control a scarce facility, access to the benefits or output of which is necessary to compete effectively. The doctrine imposes on firms the obligation to make a facility reasonably available to others on non-discriminatory terms where four elements are established:

(1) control of an essential facility by a monopolist;

(2) a competitor's inability practically or reasonably to duplicate the essential facility;

(3) the denial of the use of the facility to a competitor; and

(4) the feasibility of providing the facility.

Any limitations on timely, non-discriminatory access must be justified by those who control the facility. Further, the duty to supply is independent of proof of any intent to monopolize.

In the Canadian petroleum industry, refineries and large terminals are essential facilities very much in the sense of the above principles.

The Commission's rejection of the more costly and disruptive structural remedies urged upon it in these proceedings followed from its conviction that effective assurance of supply to efficient independents and to potential entrants would be sufficient. Keeping the import option as free and open as possible is part of the answer, but by itself is not enough. The Commission considers that it would also be desirable, in cases where a supplier holds a high degree of market power, to require that supplier to supply others unless sufficient reason for not doing so is established. In other words, as the market power over supply increases there would be less need to prove that failure to supply injured someone or that it substantially injured competition, and greater focus would be placed on the adequacy of the supplier's reasons for refusing supply.

In deciding whether or not to issue such a supply order the court or tribunal, as appropriate, would no doubt consider all relevant factors, including the number of supply alternatives in the market, the reasonableness with which supply facilities in the market could be duplicated by others, the extent if any to which the supplier and the customer compete, the extent to which the prospective customer is or is likely to be prejudicially affected in his business by an inability to obtain supply from the supplier on usual or reasonable trade terms, and the supplier's reasons for refusing supply on usual or reasonable trade terms.

The Commission considers that in the context of supply by petroleum refiners to independents, for example, the market circumstances are such that unless a refiner could establish sufficient justification for refusing supply on usual or reasonable terms, supply orders would be made.

The Commission is further of the view that effectiveness of the law would be enhanced if the aspiring customer were given the right to apply directly to the Competition Tribunal himself, rather than being limited to bringing the matter to the Director's attention.

Regardless of how the duty to supply may be defined by Canadian law, it would be desirable if Petro-Canada followed an open supply policy with respect to its own refineries and terminals so long as it does not prejudice its competitive position as against other refiners.

One possible reason for a refiner to refuse supply could be that for one reason or another he simply does not have sufficient product, after supplying his own outlets and fulfilling other contract obligations. A scarcity of product might occasionally exist at any given refinery for any of a number of reasons. Where shortages require the refiner to allocate product, he may for business reasons wish to provide an allocation to regular customers who do not have a contractual entitlement in good standing. The Commission, however, sees no public policy reason to seek to ensure such an allocation. One of the risks taken by persons who do not commit themselves by contract is that they do not have what they do not pay for, one element of which is an entitlement to receive supply or an allocation in times of scarcity.

General scarcity in the industry that leads to general emergency problems could be expected to result in direct governmental involvement as it did in 1979.

D

Conclusions and Recommendations

XXI

Conclusions and Recommendations

1. Introduction

Some of the Commission's conclusions set out below arise from the analysis in specific chapters, and in other cases they relate to matters addressed in several chapters. The Conclusions and Recommendations emerge as the bottom line as the Commission saw it at the end of the day in April 1986 when the Report was completed.

A number of allegations and criticisms in the Green Book, largely historical, are addressed first. This is followed by conclusions relating to current issues, and then by the Commission's recommendations.

The analytical support for the conclusions is to be found in the chapter or chapters dealing with the relevant subject matter. The essence of the rationale for the recommendations is repeated here.

The Commission considers that several conclusions warrant as much review by governments, legislators and the public as the recommendations because actions by one or all of these groups may be required to bring about the better functioning of markets in the situations described.

2. Conclusions Regarding Historical Allegations and Issues

The Commissioners have written separate opinions about the allegations made in the Green Book regarding the so-called overcharge of Canadian consumers by the major oil companies in the 1958-1973 period, although in some cases the variance in their assessments is slight and interpretational. While the two Commissioners are agreed on all other conclusions and recommendations in the Report, their individual appraisals of the historical allegations of overcharge set out in the Green Book differed in some degree and their separate assessments follow.

(a) The "Overcharge" Allegation

(i) Views of the Chairman

The allegations in the Green Book relating to a deliberate overcharge of Canadian consumers by the major oil companies, referred to perhaps irresponsibly by the media at the time as a "rip off", needs to be examined from two perspectives — neither of which will come as a surprise to participants in the proceedings. First, did the Director prove these allegations to the Commission's satisfaction? Second, does the evidence regarding these historical practices have any relevance to the marketplace and the public interest today?

As to the first issue, my judgement is that the Director failed to establish the Green Book allegations. Apart from questions of "excess cost", there was no proof or indeed evidence introduced during the hearings by the Director to substantiate the claim of a pass-on to consumers of so-called excess costs. As to whether or not there were excess costs, we had to look at each area where the Director alleged such "excess costs" were present.

The first of these is that Canadian subsidiaries of major oil companies paid excessively high prices for crude oil imports. This is in part a tax question, and one with which National Revenue sought to deal with varying results. Efforts to maximize profits to the U.S. parent were legitimate corporate responses unless Canadian tax or other laws were broken. National Revenue sought to monitor so-called "transfer pricing" to protect Canadian tax interests and still pursues these objectives. Limitations of staff and expertise at National Revenue may have worked in the majors' favor. This, while not explicitly a competition issue, is addressed later in this chapter in terms of its current relevance.

The other side of the public interest might be analyzed by determining whether there was crude oil available in the world market at lower prices than the prices of crude oil that moved through major affiliated channels. The analysis in Chapter VII suggests that cheaper crude oil may have been available in limited quantities. However, in my judgement, this was meaningless since Canadian subsidiaries in this industry had neither the resources nor the liberty from their parents to exploit such opportunities. Their corporate creed was tradeoffs that worked in favor of buying crude oil from and using transportation facilities of their parents.

This is not to suggest that Canadian chief executives or perhaps the boards of directors of Canadian companies did not make efforts on behalf of their own operations or minority shareholders. As indicated in the previous paragraph, there was also testimony to the effect that matters like security of supply and the use of affiliated transportation systems were more attractive than attempting to shop for cheaper crude oil. In the last analysis however, and despite occasional efforts to shop, they did not appear to have the necessary room to manoeuvre towards this objective, or a clear set of workable alternatives open to them.

Apart from the efforts of National Revenue and a rather superficial survey undertaken by the National Energy Board in 1972, the Canadian Government made no apparent effort to change these practices. This may have reflected the fact that relatively little pressure was exerted by consumers during the 1958-1973 period because of the relatively low price of gasoline and heating oil. Whatever the reason, it is incorrect to allege that the majors were "guilty" of overcharging consumers as a result of their crude oil pricing policies. However, as indicated in the previous paragraph, it is also clear that Canadian subsidiaries were subject to a high degree of control by their parent companies that left them committed to a pattern of supply through affiliated channels. It is useful to think of what lessons this has for the situation today with deregulation in Canada and, at least temporarily, a world glut of crude oil. It is clear that benefits of trade liberalization and world pricing can be undermined by parental control of Canadian subsidiaries in the petroleum industry or indeed in any other Canadian industry exposed to the forces of trade liberalization with the United States, as is now being widely discussed. Certainly for the Canadian petroleum industry and Canadian markets, it is essential that no barriers to free movement of crude oil or product or the prices at which these commodities move, be created by decisions taken by the parent.

A second element of the Director's overcharge allegations relates to a possible manipulation by the majors of the National Oil Policy (NOP) in the 1960s and early 1970s with consequential higher costs to consumers in some areas of the country. In my judgement, the views expressed in the Green Book reflect theoretical economic conclusions reached in isolation from broader policy objectives. The policy openly involved higher crude oil prices for those areas of Canada that had to substitute Canadian for foreign crude oil. I broadly support the analysis of the NOP in Chapter VI and consider that the Director was totally unjustified in attempting to attribute to the major oil companies the higher costs and prices that may have been brought about in Ontario west of the NOP line. Moreover, there is no relevance in any of the Director's case regarding the NOP, faulty as it is in my view, that has any bearing on today's situation. Unlike the National Energy Program of the 1980s, there was support for the National Oil Policy by successive governments from both parties in the 1960s and early 1970s — and like any national policy, its benefits and costs varied in different regions of Canada.

The final element of the so-called overcharge relates to excess costs related to gasoline distribution. For reasons explained in Chapter V, its inclusion in the overcharge allegations is also unwarranted.

The most important contribution the Commission can make is in its *appraisal and recommendations regarding competition in the Canadian marketplace today*. This has been done and our agreed conclusions and recommendations are set out accordingly. Nevertheless, given the seriousness of the Green Book's allegations regarding the so-called overcharge and the media's reaction at the time, I consider it very important to set the record straight based on my assessment of evidence and argument received by the Commission in the lengthy part of the hearings devoted to this issue because of the Director's allegations in the Green Book.

The Director's case that Canadian consumers were overcharged between 1958 and 1973 as a result of actions of the major petroleum companies was misconceived. There was no proof placed before the Commission that Canadian petroleum companies overcharged consumers by 12 billion dollars or that, indeed, any measurable excess costs were passed on in any significant degree between 1958 and 1973. Efforts by the Director devoted to that bit of history could have been much more productive in examining current practices in the industry and would have shortened the inquiry.

(ii) Views of Dr. Roseman

For reasons set out in Chapters IV to VII, I have concluded as follows with respect to the Green Book's allegations that excess costs were incurred and that they were passed on to consumers:

(aa) Regarding the importation of crude oil:

- There was an excess cost.
- There is no way of responsibly calculating the excess although the Green Book overstated it.
- There is virtually no direct evidence of a pass-on. To the extent that there may have been a pass-on it would have presumably taken the form of higher gasoline prices caused by deficiencies in the operation of Canadian markets.

(bb) Regarding the NOP:

- There was no excess cost attributable to actions of the oil companies. Any higher costs resulted directly and predictably from Government policy.

- In any event the Green Book calculation of the higher costs was substantially overstated.
- Most of the higher costs resulting from government restrictions imposed by the NOP were passed on to consumers in Ontario west of the NOP line.

(cc) Regarding alleged inefficiencies in marketing:

- The conceptual difficulties of attempting to identify, let alone calculate, any excess cost or pass-on in this regard are so severe that the "overcharge" framework of analysis is not helpful or illuminating. It is an extremely narrow and static framework in any event, and it is particularly so when the essential question has to do with the speed and nature of industry adjustment in differing markets and over a lengthy period of time. The underlying issues require a more complex and judgemental analysis.

(dd) Regarding imported products:

- There was an excess cost to the extent that products were imported as a result of unnecessarily high costs of imported crude oil. Some imports probably occurred for these reasons but the proportion is unknown.
- Therefore, the extent of the excess costs cannot be responsibly calculated although the Green Book undoubtedly overstated them.
- Whatever excess costs existed were passed on, primarily to consumers east of the NOP line.

(b) The "Harmonization" Allegation

The Commission found no evidence of collusion in any sector of the industry. While the Director's case technically did not include a direct allegation of collusion, there are a number of statements in the Green Book which clearly point in that direction, and in the interests of fairness the Commission wishes to make its view of the matter clear.

3. Conclusions Relating to the Post-1973 Period

(a) Domestic Crude Oil Production and Pipelines

The Commission does not see a need for additional public policy action with regard to domestic crude oil production or pipelines.

In his Green Book remedial proposals the Director had called for greater regulation of pipelines and for modification of the policies of the Alberta Petroleum Marketing Commission (APMC). Both are part of the reality of 1986. All aspects of pipeline operation, including tariffs, are regulated today. The APMC sells less than a third of the total light oil production in Alberta and must respond to market conditions like any other seller. Buyers have many sources of supply. Today, following deregulation, domestic crude oil prices are largely determined by competitive forces in the Chicago and Montreal markets where Canadian crude oils compete with foreign oil prices.

The Director did not maintain his Green Book recommendations regarding domestic crude oil production, and the Commission notes further that the deregulation of domestic crude oil pricing in 1985 has, if anything, made access to domestic crude oil by potential users even more open than it was previously.

Nor did the Director maintain his Green Book recommendations relating to divestiture of pipelines or aspects of their regulation.

The current regulatory structure is adequate, in the Commission's view, to deal with potential problems of excess profits and access to and the use of pipelines that could arise as a result of the unavoidably high concentration in this sector.

(b) Imported Crude Oil After 1973

There is no evidence that companies paid higher than third-party prices for crude oil imported into Canada after 1973 except for certain transactions described in Chapter IX.

From 1973 to 1980 most crude oil was traded internationally, and imported into Canada, at the Official Government Selling Prices (OGSP) of the producing countries. These prices were equal to or lower than those paid, on average, in third-party transactions. There then followed a period of a year or so when, after allowing for various non-price concessions, term prices exceeded OGSP price levels.

The softening of crude oil prices since 1981, their sharp drop over the last few months and the recent deregulation of crude oil prices in Canada have created a situation that, as in the 1960s, requires firms to shop diligently in order to minimize their crude oil costs. It is not an easy task, however, given the volatility of prices. It is, of course, even more difficult for government agencies, as outside parties, to evaluate the purchasing performance of firms, and transfer prices of imported crude oil become a matter for concern given the importance of the "import option" for both crude oil and product. Nevertheless, the enormous growth in the third-party market and in the volume of spot transactions eases the task of the authorities (and of the firms themselves). The development by National Revenue of carefully monitored records on the prices of different types of third-party transactions, and of their relative importance, should provide the tax authorities, given adequate resources, with an effective means of establishing fair market value standards for the various types of crude oil imported into Canada.

(c) The Refining Sector

The nature and extent of inter-refiner supply agreements, including the extensive degree of reciprocity and the long-term nature of some of the agreements, do not give rise to competition problems that require general prohibitions or advance approvals.

Inter-refiner supply agreements, even when they involve reciprocity and are long-term, usually facilitate the process of structural adjustment in the refining sector in order that it may respond to new pressures and take advantage of new opportunities. They can reduce the risk and cost of both adding to and reducing production capacity or, in other words, they can facilitate both entry and exit.

Nevertheless, the magnitude and risk of refinery investment is increasing, and with it comes a greater tendency towards a "joint venture" approach to certain refinery investment. The Commission is concerned that there is not adequate provision in Bill C-91 to ensure the opportunity for the Competition Tribunal to review long-term arrangements between refiners involving large volumes, that could reduce supply or the number of suppliers to the point where on balance the arrangement lessened competition to a degree that was contrary to the public interest. Such a provision is recommended below.

To this end, the Director should be notified of inter-refiner product supply agreements longer than five years in duration, including such agreements currently in force with longer than five years left to run.

Although a preference for reciprocal deals may on occasion add to the cost of entry by regional refiners, and may make vertical integration more pervasive, the historical record of entry suggests that these barriers were not of a sufficient magnitude to justify remedies curtailing the agreements. Part of the added cost of entry is offset by improved efficiencies for the other parties to such agreements. These conclusions, however, are considerably less certain in an environment of little or no growth.

The detailed evidence on particular inter-refiner supply agreements clearly indicates that typically each refiner enters into such arrangements solely with a view to preserving and improving its own individual competitive position as against the rest of the industry, even though this also presumably involves an improvement of the competitive position of the other party to the agreement. It might also, however, produce benefits to firms who are not party to the particular agreement by facilitating a reduction of capacity such as might occur with a merger.

It is not a characteristic or effect of such agreements to stabilize market shares or to deprive unintegrated marketers of supply. It is, however, important to distinguish between essential aspects of the agreements and collateral conditions that might exist in specific agreements. Should any agreement, whether involving refiners or anyone else, restrict in any way the distribution of the product being supplied, or amount to market sharing, or limit in any way the supply or terms of supply to others, or involve a commitment to limit supply or involve any other type of exclusionary commitment, then the rules and procedures under the Combines Investigation Act that apply equally to all industries should provide sufficient remedy. The Commission does however make a recommendation below regarding the scope of a supplier's general duty to supply.

(d) Gas is Gas

The quality of gasoline produced by Canadian refiners is of a uniformly high standard. In fact, refiners themselves frequently sell, under their own brands, gasoline refined by a competing refiner. Similarly, independents receive the same high quality gasoline from Canadian refiners.

As for imported gasoline (and both refiners and independents import to some extent), evidence of sub-standard quality is virtually non-existent.

There was no evidence of quality differences between gasoline as sold to consumers by major-brand outlets and that sold by independent or private brand outlets.

(e) Mergers

A number of mergers in the refining and marketing sectors have increased concentration and removed effective competitors. The merger proposals in Bill C-91 should deal adequately with this subject in the future.

(f) Vertical Integration and Marketing

(i) **The Commission is concerned about the trend over the last decade towards greater centralization in the hands of refiners of the power to set pump prices. Supply arrangements under which refiners obtain partial or complete control over the retail prices of customers with whom they would otherwise compete at the retail level tend to lessen competition.**

In the Commission's view support programs that relate the amount of support to particular retail prices (as is the case with all margin support programs referred to in the evidence), and that are widespread in the industry, are contrary to the public interest. Similarly, the competitive harm becomes significant when extensive arrangements are entered into between refiners and retailers under branded and unbranded agency agreements.

(ii) **A comparison of the available cost information with the margins earned by major-brand gasoline dealers, and by independents in both heating oil and gasoline distribution, does not support allegations or fears that independents have generally been subjected to a predatory margin squeeze in recent years. However, the margins of the smallest independents in gasoline distribution appear to have been severely compressed throughout most of 1979-1983, the period for which information is available.**

(iii) **Regional price differences and swings in prices over time are due largely to variations in competitive conditions caused in part by the number of refineries, the number and types of marketers, the degree of excess refining capacity and the availability of imports. Tax differences and other government interventions also affect prices on a provincial basis.**

(iv) **The Commission finds it difficult to envisage a market restriction in this industry that would not, in its view, be contrary to the public interest.**

For example, processing or otherwise supplying product to persons for export only, on condition that it not be distributed in Canada, seems impossible to justify. Also, unbranded resellers are occasionally prevented by their suppliers, by contract, from reselling in any way other than through their own consumer outlets. On balance, however, in view of the scope of existing legislation and the few current instances of market restriction in evidence, no specific recommendation in this regard is being made.

(v) **All retailers should retain full freedom to offer discounts to customers who pay by cash rather than by credit card.** The Commission considers, however, that the existing price maintenance prohibitions in the Act are sufficient to ensure this freedom, and accordingly recommends no change to the law in this respect.

(vi) **Non-Petroleum Use (NPU) covenants obtained by refiners when they sell former retail gasoline sites have no purpose other than to create an entry barrier into gasoline retailing and, therefore, are not in the public interest.**

While it cannot be concluded that the covenants are always an important barrier to entry, they have no redeeming feature.

(vii) **Recent changes in wholesale pricing practices, referred to as "rack pricing", adversely affect competition insofar as they involve openly stated policies that confidential discounts will not be granted off published prices.**

The effect of public announcements by suppliers in a tight oligopoly to the effect that they will not be granting unpublished discounts off published or widely-known supply prices, can produce an effect very much like that of a horizontal agreement. It communicates past and current actual transaction prices to competitors of the supplier and to competing customers, and where the products are as homogeneous as petroleum products it presents a real risk to the intensity of price competition. Such is the case with the emerging so-called "rack-pricing" policies of Imperial Oil and other refiners. The no-discount aspect of those published policies is not necessary to their legitimate purposes. The expectation of the refiners, and the probability, is that retail motor fuel prices will be stabilized by such a policy and raised above levels that would otherwise exist.

(viii) **The characteristics of the heating oil market with respect to the lack of readily available information on prices and the tendency of consumers to settle on a supplier for at least the duration of a heating season requires consumers to shop actively in order to get best value for their money.**

In some cases this shopping is performed on behalf of consumers who are members of voluntary organizations who negotiate discounts on their behalf. Individual consumers can also be effective in negotiating better prices, for what is a major household expenditure, if they take the trouble to try.

(ix) **A viable independent sector operating efficiently in the retailing of gasoline (and heating oil) contributes to the health of markets in Canada by decentralizing pricing decisions and other strategic competitive initiatives.** The following three conclusions and the related recommendations support this objective.

(x) **The unavoidably high concentration in petroleum refining, together with pervasive vertical integration and dual distribution, makes it very important to take all reasonable steps to maximize the assurance of supply to unintegrated marketers. One avenue is to clarify the scope of the duty of domestic refiners to supply product to others. Secondly, it makes the import option an extremely important competitive factor in areas of the country open to imports.**

These ways of assuring ready access to supplies are more important in Canada than in countries such as the United States which, by virtue of their larger markets, have more refiners, wholesalers and retailers and stronger general competitive pressures.

(xi) **It is important that there be a legal standard of "predation", which is to say a line beyond which conduct by one firm that has harmful effects on another firm's ability to stay in business or to compete, is unjustifiable and against the public interest.**

The Commission considers that the existing law, particularly if supplemented as proposed by Bill C-91, is adequate in this regard. In view of the generality of the existing law, however, the Commission's recommendations set out guidelines for its application to pricing in a dual distribution context.

(g) Government Policies and Programs

There is a need for improved understanding at all levels of government of the effects of government policies on the petroleum industry. There is also a need for improved consultation regarding the purposes and implementation of government policies affecting the industry.

There are so many facets of the "public interest" in this industry, affecting everything from feedstock reserves to retail product markets, and involving the federal, provincial and municipal governments, that some overlap or even conflict of public policies is inevitable. Even within the Federal Government, officials of agencies whose main concern is ensuring overall security of supply, and other officials whose main concern is the healthy functioning of markets (assuming adequate overall supply), do not always appear to agree about priorities where their respective policies interface.

The maintenance of open competition and healthy markets is surely a major dimension of Canadian public policy, and yet it is a truism that frequently as much damage, distortion and cost of a serious and long-term nature is inflicted on the operation of markets, and on the public, by government programs or by their implementation or administration, as by any private sector conduct that contravenes the competition laws.

With respect to the upstream sector, concerns were expressed in the Inquiry about the harm done to markets, perhaps unnecessarily, by aspects of the Oil Import Compensation Program, by prorationing in the Province of Alberta and by aspects of crude oil marketing as carried out in the past by the Alberta Petroleum Marketing Commission.

As to retail marketing, regulatory regimes in Nova Scotia and to a lesser extent in recent years in Prince Edward Island, and also in several municipalities in British Columbia, restrict the establishment of self-serve outlets, full-service gas bars and various forms of cross-merchandising and thereby deprive consumers in those jurisdictions of lower-cost options available to consumers elsewhere in Canada. Such restrictions cripple the ability of the industry to adjust to meet consumer demand, and to charge lower prices made possible by lower cost distribution of gasoline and induced by competitive pressures. The variety of offerings across the country by independent marketers and by integrated firms illustrates the value of allowing each business the freedom to meet consumer needs as it best sees fit in order to strive at all times to maximize its appeal to members of the public by giving them what they want.

In more general terms there was evidence to the effect that rapidly changing government policies, and bureaucratic complexity and discretion, have themselves constituted barriers that were particularly inhibiting to smaller entrepreneurs.

(h) Petro Canada

Government ownership of Petro-Canada affords unique opportunities to correct certain market defects.

The rapid growth of Petro-Canada by acquisition since 1979 has been a mixed blessing in terms of competition in the downstream sector. Although it has increased concentration significantly, it has at the same time consolidated the regional refining and marketing operations of several companies into a potentially stronger competitive force throughout Canada.

Petro-Canada witnesses testified that the company endeavours to comply with the Combines Investigation Act, and if Bill C-91 is enacted it will be required by law as an agent Crown corporation to do so. The fact that it is Government-owned, however, offers a unique opportunity to go further and to use Petro-Canada's potential to promote competition in an industry where the extent of concentration in conjunction with vertical integration continually threatens the vigor of market forces. The small and geographically dispersed nature of the Canadian market, and the magnitude of refinery investment due to economies of scale, in particular, make significant degrees of market power in the Canadian downstream sector unavoidable. Petro-Canada gives the Government the opportunity to reduce the competitive restraints and associated public cost of that market power, not only without having to pass special laws, but also in an ongoing pervasive way that probably could not be achieved by laws.

The Commission does not have in mind the possibility of Government pressures or directives to Petro-Canada with respect to particular aspects of performance, such as reducing pump prices at particular places or times or in particular amounts, because such regulatory-like interventions may do more harm than good. Rather, the Commission has in mind the pursuit of broad market policies, relating for example, to negotiated discounts from listed rack prices, that can limit the oligopolistic similarity or identity of practices that normally would tend to develop and that can have many of the adverse effects of horizontal agreements among competitors. The Government could have this influence by ensuring that possible improvements to the operation of product markets in Canada were given some priority when Petro-Canada's corporate plans and capital budgets were being settled.

(i) Refinery Closures and Supply in Quebec

(i) **The relatively large decline in petroleum product demand in Quebec in the early 1980s made the closure of Montreal refineries that occurred in 1983 a virtual necessity**. Furthermore, the closures themselves produced a secondary effect, namely a further decline in total sales from Quebec refineries to areas inside and outside the province resulting from the fact that the vertically integrated firms who closed their refineries supplied part of their requirements for the Quebec region from their refineries elsewhere. This secondary effect created pressure to close additional refining capacity.

(ii) **The sale and closure of Gulf's Montreal refinery cannot usefully be evaluated on the basis of whether there was "enough" remaining capacity in Quebec, in view of the ready movement of product regionally and internationally**. The principal relevant questions relate to the effects of the closure on competition in Quebec and surrounding areas (principally New Brunswick and Ontario). By reducing surplus capacity the closure no doubt diminished competitive pressures in those areas, but the Government of Canada, by approving Petro-Canada's acquisition of Gulf's Texaco processing contract and subsequently Ultramar's acquisition of Gulf assets, determined that on balance those transactions were in the overall public interest.

4. Recommendations

Recommendation No. 1: To deal with several practices in the petroleum industry and those that may from time to time arise in other industries, a section should be added to Bill C-91 that would allow the Tribunal to issue orders requiring the discontinuance or non-repetition of any conduct that would substantially lessen competition.

Under such a section an order could be issued by the Tribunal whenever it could be established to its satisfaction that the conduct in question has or would substantially lessen competition. The Commission considers that such a provision ought not apply to conduct that was only "likely to" substantially lessen competition, and that it ought only apply to situations where the harm was more certain. At the same time, the proposed provision would not suffer many of the limitations currently contained in section 51 as proposed by Bill C-91.

The proposed section would, for example, permit the following types of conduct or practices in the petroleum industry to be remedied:

(a) large volume, long-lasting exchange agreements where the effect of the agreement was to reduce supply in a market to the point where competition would be lessened substantially; and

(b) support programs or agency or other agreements where the supplier obtains complete or substantial control or influence over a customer/competitor's prices and competition is thereby lessened substantially.

It would be a mistake, in the Commission's view, to enact a new series of provisions limited in scope to the form of each type of arrangement, conduct or circumstance that one could imagine, that could lessen competition substantially (e.g., "exchange agreements", "agency agreements", "support allowances" and so on). Legislative focus on the *form* of a potentially harmful practice rather than on functional *effect* invites firms to introduce new ways of accomplishing the same result that are untouched by the legislation. It also would have the result of proliferating legislation, with the costs of delay and consumption of Parliamentary time as "loopholes" are continually patched to protect the public interest.

Like much of Bill C-91, the section proposed here does not have the degree of specificity or provide the extent of advance certainty or guidance to businessmen that would be required if it were to be criminal law. But then, the great advantage of civil law review is that the public interest can be more effectively protected from conduct or practices that, while in most cases they may promote the public interest or at least not harm it, nevertheless in other circumstances may be found on review to harm the public interest. There is no way of completely dealing with the concern that business disruption and loss may result from a prohibition order, but this problem is common to any competition law. The Director can, of course, be consulted to learn whether he would bring the conduct in question before the Tribunal. Additionally, it may be assumed that the Tribunal would consider all the circumstances when issuing an order and would seek to minimize unnecessary hardship.

Recommendation No. 2: Suppliers who hold high degrees of market power should not be entitled to refuse supply to others except to the extent that they can establish sufficient reason for refusing supply. Market power being a matter of degree, the greater a person's market power is over supply the less should be the need to prove that the refusal injured someone or that it substantially lessened competition, and the more the focus should be on the adequacy of the supplier's reasons for refusing supply.

In deciding whether or not to issue such a supply order the court or tribunal, as appropriate, would no doubt consider all relevant factors, including the number of supply alternatives in the market, the reasonableness with which supply facilities in the market could be duplicated by others, the extent if any to which the supplier and the customer compete, the extent to which the prospective customer is or is likely to be prejudicially affected in his business by an inability to obtain supply from the supplier on usual or reasonable trade terms, and the supplier's reasons for refusing supply on usual or reasonable trade terms.

The Commission considers that in the context of supply by petroleum refiners to independents, for example, the market circumstances are such that unless a refiner could establish sufficient justification for refusing supply on usual or reasonable terms, supply orders would be made.

Recommendation No. 3: Jurisdiction to grant interim orders, particularly with respect to matters affecting supply, should be conferred by legislation.

In making this recommendation the Commission notes with satisfaction that Bill C-91 proposes that a comprehensive power to grant interim orders exist for all matters within the proposed new Part VII jurisdiction of the Competition Tribunal.

Recommendation No. 4: Any person who has been refused supply should be entitled to apply directly to the Competition Tribunal for relief.

The advantages of direct access are that complainants could thereby avoid the delays of having to go through the Director's office when seeking redress of their supply problems, and they could direct the presentation of evidence and argument.

The concern that is sometimes expressed regarding direct public access to the Tribunal is that such access could be used to threaten or harass suppliers. These fears are based largely on experience in the United States with treble damage litigation and have little relevance here. The Tribunal could be relied upon to discourage any possible abuses of its procedures, like any other court.

Recommendation No. 5: The Government should be empowered to exempt particular mergers from review by the proposed Competition Tribunal.

It is possible that two acquisitions considered to have been in the overall public interest by the Government (Petro-Canada's and Ultramar's respective acquisitions of Gulf's downstream assets) would have been brought before the Competition Tribunal had Bill C-91 been law. This means that acquisitions considered to be in the overall public interest by the Government might have been prohibited by a decision-making body applying narrower public interest criteria than those used by the Government. There should be some means of implementing broad public interest criteria with respect to mergers, and only the Government is capable of so doing. A general exemption power would also place domestic mergers on a basis comparable to that of foreign mergers under the Investment Canada Act. Concerns about the independence of the judiciary that could arise if the Cabinet were given power to override a judicial decision would not arise if Cabinet approval or exemption were given before a case was brought before the Tribunal. Although there would be a cost in terms of the loss of a thorough and open assessment of competition policy concerns, it may be assumed that government intervention would only take place when there were other clear and persuasive public interest reasons for an acquisition to go ahead. It would be desirable for the government to articulate publicly its reasons whenever it declared such an exemption, as well as any terms of the exemption.

Recommendation No. 6: Refiners should not impose non-petroleum use covenants on land they sell, and should declare publicly that they will not enforce the covenants they hold on properties they have already sold.

Recommendation No. 7: Further to the conclusion regarding the standard for identifying predation, suppliers and the Director should apply the following guidelines in determining the limits of appropriate pricing in the dual distribution context of the petroleum industry:

1. *Independents should not be required to pay more, at any time, than the lowest retail price charged in the independents' market area by the supplier (i.e., at outlets where the supplier sets the pump price), less reasonable product transportation cost.*
2. *A refiners' net return from retail sales should be no less than the net return on its sales to either branded dealers or independents in any market area.* The calculation of net returns for the purposes of this test would necessarily depend upon the time frame involved and on whether the industry is depressed, static or expanding.

Recommendation No. 8: Refiners who have stated that they will not grant unpublished discounts off published prices should abandon this aspect of their "rack pricing" policies.

Recommendation No. 9: With respect to Petro-Canada:

(a) It would be in the public interest to require the recommendation of the Minister of Consumer and Corporate Affairs, in addition to the ministerial recommendations that are required under existing law, as a precondition for the approval of Petro-Canada's capital budgets, corporate plans and any amendments thereto, and for Government directives to Petro-Canada.

(b) Even though it may not be required by law to do so:

- i) Petro-Canada should not provide to others any assurances that it will not grant confidential discounts off its published prices to resellers or other large volume customers.
- ii) Petro-Canada should abandon its practice of obtaining and enforcing non-petroleum use covenants.
- iii) Petro-Canada should continue to pursue a policy of open and non-discriminatory supply from its refineries to unintegrated marketers to the best of its ability to do so.

(c) Petro-Canada and its employees should be made fully subject to the provisions of the Combines Investigation Act, except to the extent that acts are done pursuant to specific directive or approval of the Governor in Council.

(d) As long as the company is publicly owned, a Committee of Parliament should review the Petro-Canada Act and the purposes and operations of Petro-Canada every five years. Such a review would be facilitated by a special report from Petro-Canada, and by a report from the Minister of Consumer and Corporate Affairs as to Petro-Canada's effect on those aspects of the public interest for which he is responsible.

Recommendation No. 10: With respect to federal, provincial or municipal government interventions into any aspect of the petroleum industry:

(a) The Commission commends to the federal, provincial and municipal governments alike, in regard to any regulation or contemplated regulation of entry, pricing or output, the basic principles embodied in the Federal Government's policy proposals entitled *Freedom to Move: A Framework for Transportation Reform* (1985). In particular, the Commission's examination of provincial and municipal regulation of gasoline retailing persuades it that the public would be better served if any government licensing decisions regarding new entry and proposed new offerings were guided by a test of "fit, willing and able" instead of "public convenience and necessity".

(b) The experience and knowledge of the office of the Director of Investigation and Research should continue to be made fully and openly available, through both private consultations and public hearings, to assist agencies, departments and officials of all governments in regard to such regulation of specific industries as may be thought necessary in the public interest.

(c) Aspects of the organization and performance of the downstream petroleum sector are of such general public interest and importance, that it would be desirable for federal and provincial governments to consult more systematically at senior levels in order to review industry performance and to coordinate their objectives and policies to the extent possible.

Recommendation No. 11: Restrictions on the importation of petroleum products into Canada should be avoided in order to promote competitive markets in Canada. To the extent that the Government supports continuation of a policy of open access it is important to let the industry know.

This would indirectly benefit consumers and would directly benefit potential importers and other wholesale buyers who are faced with decisions regarding investments in facilities or the duration and types of supply contracts into which they might enter.

Recommendation No. 12: Consumers should seek to strengthen their market position by drawing on their collective bargaining (or buying) power.

Many organizations, including automobile associations, could usefully explore the feasibility of obtaining price concessions on gasoline on behalf of their members in a similar way that this is accomplished by a number of organizations with respect to heating oil.

Chairman

Member

Ottawa
May 16, 1986

Appendices

A

Appearances

Counsel or Spokesperson	**Representing**
G. Hotte M. Doyon	Association des distributeurs indépendants de produits pétroliers
A. Dinard	Association des services de l'automobile
G. McKenzie	Automotive Retailers Association of Alberta
P. Richards	Automotive Retailers Association of British Columbia
J.L. McDougall S.J. Simpson	BP Canada Inc.
J. Conrad	Canadian Federation of Independent Petroleum Marketers
D. Arthurs	Canadian Tire Corporation, Limited
H. Wetston	Consumers' Association of Canada
G.F. Henderson G.E. Kaiser G.N. Addy	Director of Investigation and Research
E. Sojonky	Department of Energy, Mines and Resources
M.J. Bruni D. Holgate	Energy Resources Conservation Board of Alberta
J.J. Robinette C.L. Campbell J.J. Colangelo M.E. Barrack	Gulf Canada Limited
J.F. Howard G.F. Leslie L.D. Robinson J.L. Ronson A. Blakely N. Hesler	Imperial Oil Limited

J.W. Brown	Interprovincial Pipe Line Limited
H.H. Stikeman D.M. Gillis L. Barnes	Irving Oil Limited
F.R. Matthews	Murphy Oil Company Ltd./Spur Oil Ltd.
L.M. Joyal	National Automotive Trades Association of Canada
L.E. Smith	National Energy Board
J. Meagher	Department of National Revenue
G.W. Sholtack	Ontario Ministry of Revenue
T.W. Troughton	Ontario Retail Gas and Automotive Services Association
J. Sopinka K. Chalmers R. Watson	Petro-Canada
J. Chipman	Petrofina Canada Inc.
J. Conrad	Petroleum Marketers Association of Canada
J.H. Francis	Petrosar Limited
D. Thompson	Retail Gas Dealers Association of Nova Scotia
M. Woods	Government of Saskatchewan
A. McN. Austin J. Lax	Shell Canada Limited
J.A. Schwartz	Southland Canada, Inc.
A. Lutfy J. Chamberland	Suncor Inc.
L. Morphy D. Porter	Sunys International Inc.
C.R. Thomson Y. Fortier M. Frawley R.T. Hughes	Texaco Canada Inc.
D. Campbell	Ultramar Canada Inc.

Counsel to the Restrictive Trade Practices Commission

B.C. McDonald
M. Bélanger

B

Witnesses[1]

		Transcript[2] Volume(s)
	PIPELINE COMPANIES	
Interprovincial Pipe Line Limited		
R.K. Heule	President	141
	REFINERS	
BP Canada Inc.		
L.E. Barchard	former Vice-President BP Canada	99-100
J.A. Barclay	former Vice-President BP Canada	99-100, 123
T.R. Dalglish	former Vice-President BP Canada	162-163
Federated Co-operatives Limited		
B.F. Dahlstrom	Refinery Manager, Consumers' Co-operative Refineries Limited.	172
I.H. Donald	Manager, Agro Division	172
V.J. Leland	President	172

---

[1] Position titles shown relate to capacity in which witnesses appeared or to position held at time of testimony.

[2] Transcript volumes show date(s) and location of testimony.

Gulf Canada Limited

J.D. DeGrandis	Senior Vice-President Gulf Canada Products Company	111-114, 136-136A, 169-170
M.A. Fuss	Professor of Economics, University of Toronto	116-117, 138-139
J.A. Holding	Director, Crude and Products Supply, Gulf Canada Products	73
P. Leroux	Manager, Human Resources, Gulf Canada	169-170
T. Matsushita	Vice-President, Gulf Canada	181-181A
D.R. Nelson	Region Manager, Marketing, Eastern Canada, Gulf Canada	128-132
J.A. Roode	Director, Corporate Planning Gulf Canada	128-132
D.C. Shaw	Director, Ph.D. Program, School of Business Administration, University of Western Ontario	139-140, 170-171
G.C. Watson	former Manager, Refinery Sales, Gulf Canada	128-132
L. Waverman	Professor of Economics, University of Toronto	72-73, 116-117, 138-139
J.E.L. West	Director, Planning and Public Affairs, Gulf Canada	111-114, 136-136A

Imperial Oil Limited

W.D. Archbold	former Vice-President, Imperial Oil	63, 142-147
M.C. Bell	General Associate, Income Tax	65
H.M. Brewster	Senior Analyst, Exxon	63-64
M.T. Budd	Manager, National and Export Sales Division, Esso Petroleum	148A-150, 173-174A, 192-194A

D.B. Foster	Assistant General Manager, Retail Marketing Department, Esso Petroleum	142-150, 173-174A, 183D
C.A. Hayles	Vice-President, Esso Petroleum	142-150, 173A-174A
M.J. Huffman	former Assistant General Manager, Supply Department, Esso Petroleum	62-65, 110-111
J.G. Livingston	former President, Imperial Oil	62-63
D.F. MacLauchlan	Vice-President and General Manager, Supply Department, Esso Petroleum	110-111
M.E. McInerney	Manager, National Business Development, Esso Petroleum	183D
T.B. Metzing	Assistant General Manager, Marketing Department, Esso Petroleum	148A-150
D.R. Purdie	Vice-President, Esso Petroleum	183D, 192-193A, 194A
A.K. Quan	Senior Planning Advisor, Supply Department, Esso Petroleum	110-111
J.L. Stevens	Automotive Business Manager, Retail Division, Imperial Oil	142-150, 173-174A, 183D, 192-194A
T.H. Thomson	Senior Vice-President, Imperial Oil	142-148A, 183D
G.K. Whynot	former Vice-President, Imperial Oil	65

Irving Oil Limited

A. Irving	Chairman and President, Irving Oil	83-83A, 167

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J.F. Bechtold	General Manager, Supply and Logistics, Petro-Canada	43
D.A. Dean	Manager, Foreign Crude Oil Supply Operations, Petro-Canada	43
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J.H. Dagher	Vice-President, Petro-Canada Products	175-178A
D.A. MacKenzie	Senior Vice-President, Petro-Canada Products	175-178A
J. McNicholas	Director, Economics, Policy Analysis and Regulatory Affairs, Petro-Canada	175-178A
V.G. Sundstrom	former Vice-President, Petro-Canada Inc.	175-178A
W.A. West	President, Petro-Canada Products	175-177, 194

Petrofina Canada Inc.

R.E. Reade	former General Manager, Retail Sales, Petrofina	155-156A
R.J. Redding	former Vice-President, Marketing, Petrofina	155-156A
N. Van Son	former Vice-President, Supply and Distribution, Petrofina	155-156A
H.S. Williams	former Regional Manager, Petrofina	155-156A

Petrosar Limited

D.R. English	Marketing Manager	104

S.K. Lamb	Supply Manager	104
B.G.S. Withers	Vice-President	104

Shell Canada Limited

L.F. Bolger	Vice-President	81-82
H.R. Daboll	Manager, Automotive Policy	133-137
P. Gordon	former Senior Vice-President	159-160
W.M. Hall	Manager, Marketing Systems and Administration	193
R.P. Ritchie	former Vice-President	81-82
A.G. Seager	Vice-President, Marketing	133-137
D.J. Taylor	Executive Vice-President	133-135, 159-160
C.F. Williams	former Vice-President	133-137

Suncor Inc.

G.H. Brereton	Vice-President, Sunoco	161-161A
N.J. Hathway	Director, Supply and Transportation, Sunoco	161-161A
K.F. Heddon	former Chairman of the Board of Directors, Sun Oil Company	78-79
D. Henderson	former Director, Finance and Administration, Suncor	100
J.M. Gilchrist	Director, Taxation, Suncor	161
M.W. O'Brien	Vice-President, Sunoco	161-161A
D.W. Parker	Manager, Crude Oil Supply, Sunoco	80
D.M. McGeer	Senior Vice-President, Suncor	78-79

Texaco Canada Inc.

R.G. Allan	Manager, Computer and Information Systems Department	120-122
O.C. Cleyn	Vice-President	120-122, 124-127
H.T. Hudson	former Vice-President	75-77, 119-122, 124-127
R. Krantz	former Assistant General Manager, Sales	120-122, 124-127
D.W. Maddock	Regional Director, Marketing	120-122, 124-127
C.A. Monk	Manager, Travel Card Marketing	120-122
J.L. Morrison	Executive Vice-President	75-77
J.M. Murray	Vice-President	75-77, 119-122, 124-127, 180-180A
T.J. Puccini	Manager, Operations Centre	120-121
N.E. Taylor	Vice-President	120-122, 124-127
S.J. Walker	Vice-President	75-77, 119-122, 124-125, 180-180A

Turbo Resources Limited

B. Miller	Vice-President	153
J.G. Sioui	Vice-President	153

Ultramar Canada Inc.

J. Allan	Executive Vice-President	98-99A, 157-158A

MARKETERS[3]

J. Antosko Winnipeg, Man.	Gas bar owner	28

---

[3] Many individual marketers who appeared were Members of the National Automotive Trades Association (NATA) and the Association des Services de l'Automobile du Québec (ASAQ). Others were Members of the Canadian Federation of Independent Petroleum Marketers (CFIPM) and the Association des Distributeurs Indépendants de Produits Pétroliers (ADIP). See also the lists below for the retailers' associations.

Blakeny & Son (1979) Ltd. Moncton, N.B.	R.B. DesBrisay President	20
Bellemare, J.A., Limitée Shawinigan, Quebec	M. Bellemare Owner	25
Bimar Montreal, Quebec	R. Martimbeau Owner	26
M. Braunstein Winnipeg, Man.	Tempo brand retailer	28-29
Caloil Inc.	P. Senécal, Founder and former President	44, 95
	R. Dulude, former Secretary-Treasurer	44, 95
Canadian Tire Corporation, Limited	A.B. Malcolm Vice-President	103-103A
Car-Pet Holdings Limited St. John's, Nfld.	O.D. Carver President	105
R. Carr Windsor, Ont.	Sunoco gasoline retailer	88-89
Cencan Petroleum Limited	B. Loeb, Chairman	181, 181B-181C
	K.J. McCrimmon, President	93-93A4, 181, 181B-181C
CDN Petroleums Limited Hamilton, Ont.	W.A. Hemstreet President	52, 59
H. Chiarella Winnipeg, Man.	Gas bar owner	28
Compagnie d'Huile Cortina, Inc., La	A. Paradis Co-owner	48
N. Cowley Windsor, Ont.	Gulf gasoline retailer	90
M.E. Curd	former Vice-President of Headway Corporation and former Vice-President of Metro Fuels, Moncton, N.B.	86
Distributions Réjean Bellemare Limitée	R. Bellemare former owner	26

Louis Drouin Inc. St-Georges, Beauce, Quebec	J. Drouin, Owner	51
P.R. Drouin Ottawa, Ont.	Esso gasoline retailer	18
Drummond Fuels (Ottawa) Ltd.	G.W. Drummond President and owner	17
Eldorado Petroleums Ltd. Shaughnessy, Alta	D.L. Morris President	10
Fifth Wheel Truck Stops Ltd., Milton, Ont.	C. Warren, President and principal owner	91-91A
	J. Ritchie, Director, Finance and Administration	195
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J.H. Frison Reserve Mines Cape Breton, N.S.	Petro-Canada gasoline retailer	19
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T. Glennon Windsor, Ont.	Savemor Petroleum Limited	86
Golden Triangle Oils Limited Kitchener, Ont.	J. McCrory Vice-President	87-87A
Guindon Petroleum Limited Cornwall, Ontario	F. Guindon, President L. Guindon, Vice-President	86-86A
A.H. Gurney Kamloops, B.C.	former Esso gasoline retailer	11
Hi Ho Gas Limited Edmonton, Alta.	D. Jung, Owner	10

Huiles Bertrand Inc., Les Chomedy, Laval, Quebec	R. Bertrand Principal shareholder	50
Huiles Nolin Inc., Les Huiles Ultrabec Inc., Les Quebec, Quebec	C. Bernier Shareholder	50
Ivanhoe Inc. Mont St-Hilaire, Quebec	C. Mercier Director	177
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P. Malenfant Windsor, Ont.	Petro-Canada gasoline retailer	89-90
McAsphalt Industries Toronto, Ont.	J.J. Carrick President	87, 90
Merit Oil Company Limited Vancouver, B.C.	R.G. Brodie former Chairman and CEO.	49, 59-60
Metro Fuel Company Ltd. Moncton, N.B.	A. Landry, President and founder	88, 94-94A
	N. Robichaud Vice-President	88
Mohawk Oil Co. Ltd.	D. Skagen President	101-101A

Motoco Petroleum Inc. Montreal, Quebec	W. Kaneb Chairman	41
Mr. Gas Limited Orleans, Ont.	A. Gagnon Secretary-Treasurer	15-16
Murphy Oil Company Ltd. /Spur Oil Ltd.	P.C. Bilger, Vice-President Manufacturing, Murphy Oil Corporation, U.S.A.	102
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Natomas of Canada, Ltd.	M. Chevalier President	152
J. Neville Windsor, Ont.	former Sunoco gasoline retailer	88-89
Norco Oil Ltd. Montreal, Quebec	S. Abracen President	166-166A
R. Ouimette Windsor, Ont.	Esso gasoline retailer	90
Pay Less Co. (1972) Ltd. Victoria, B.C.	A. Vandekerkhove President and founder	180
Perrette, Laiterie Ltée	J.-L. Gauthier	56-59
M. Pierre Windsor, Ont.	former Texaco gasoline retailer	90
Pioneer Petroleums	M.E. Hogarth President	30-31
Produits Pétroliers Elan Ltée, Les	D. Deschamps President	54
Ravenda Incorporée Duvernay, Laval, Quebec	N. Ravenda Owner	25
R. Renaud Windsor, Ont.	Shell gasoline retailer	89-90

Robbins Feed & Fuel Ltd. and Robbins Gas Bars	W.G. Robbins C. Robbins, President	32, 168 168
Rosen Fuels Limited Kingston, Ont.	H. Rosen, President S. Rosen, former President of Buy Rite Gasoline Co. Ltd.	46
Selig, H.W. Petroleum & Heating Limited Bridgewater, N.S.	H.W. Selig President	19
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P. Sigouin Chomedey, Laval, Quebec	Shell gasoline retailer	23
Sipco Oil Limited	G.M. Cushman N. Turner, President	55 40
Southland Canada, Inc.	R. Storms, Manager Gasoline Marketing 7-Eleven Food Stores	171-171F
Sunys International Inc.	A.C. Martin, former President G.P. Norris, President J.E. Robillard, Chairman	84-85A
K.J. Taylor Winnipeg, Man.	Tempo gasoline dealer	29
Trans-Quebec Huile Inc. Montreal, Quebec	J.-L. Poupart former owner	48
Universal Terminals Ltd. Cornwall, Ont.	T. Kaneb President	15, 69
Uraken Canada Limitée St-Sauveur des Monts, Quebec	F. De Baets Administrateur et contrôleur	177
Venne et Laurain Inc. Repentigny, Quebec	L. Dubé former shareholder	26
F. Willis Windsor, Ont.	B.P. gasoline retailer	88-89
Wilson Fuels Limited Truro, N.S.	P. Wilson Joint owner	21

Witco Chemical Canada Limited Willowdale, Ont.	J.E. Coleman Vice-President	103

ASSOCIATIONS

The Consumers' Association of Canada

S. Hall	Alberta Branch	10
J. Douglas M. Roseblade	British Columbia Branch	14
B.H.C. Fulcher	Manitoba Branch	34
M. Holgate	Nova Scotia Branch	21
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A. Dinard	Secrétaire-général	24

The Automotive Trades Association of Ontario

K.W.J. Langdon	Consultant to Automotive Trades Association of Ontario	33

The Ontario Retail Gasoline and Automotive Service Association

C.D. Turner	Past-President of ORGA	18

The Automotive Retailers' Association of British Columbia

R. Baldwin	Manager	11-13
D. Bruce	Past-President, and Shell gasoline retailer	11-13

J. Ford	President, and Esso gasoline retailer	11-13

The Retail Gasoline Dealer Associations of Nova Scotia and Prince Edward Island

D.H. Mader	Executive Director	19

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P. Dickson	Past-President and Gulf gasoline retailer	9
J.F. Johansen	President, Sturdie Oils Ltd.	9
D.P. Kennard	Esso gasoline retailer	8
P. Land	President, Land's Happy Marts Ltd.	9
G.G. McKay	Texaco gasoline retailer	8
G.K. Raddatz	President, Alberta Automotive Retailers' Association and Esso gasoline retailer	7
D.H. Scrivens	Owner, Edan Auto Services Limited and former Gulf gasoline retailer	8
P.C. Vail	Past-President and former Esso gasoline retailer	10

EXPERT WITNESSES CALLED BY THE DIRECTOR

W.J. Borns	Vice-President H. Zinder and Associates Consultants Washington, D.C., USA	106-109
K. Brant	Consultant in Energy Regulatory Law and International Petroleum Trade Matters Watertown, Wisconsin, USA	37-39, 66-68, 70-71, 189-190

P. Davidson	Professor of Economics Rutgers University Princetown, New Jersey, USA	66-68, 70, 184-190
P. Eglington	President Peter Eglington Associates Limited, Ottawa, Ont.	34
H. Harries	Economic Consultant Edmonton, Alta	106-109, 184-190
G. Lermer	Dean, Faculty of Professional Studies The School of Management University of Lethbridge Lethbridge, Alta	184-188
T.J. McCann	Vice-President RTM Engineering Ltd. Ottawa, Ont.	106-109
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A.J. Kealey	Director Petroleum Compensation	42, 44, 185
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Revenue Canada

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National Energy Board

A. Currie	A/Chief Domestic Crude Oil Division	115
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Le Ministère de l'Énergie et des Ressources (Québec)

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M. Koskie	Minister, Consumer and Commercial Affairs	27

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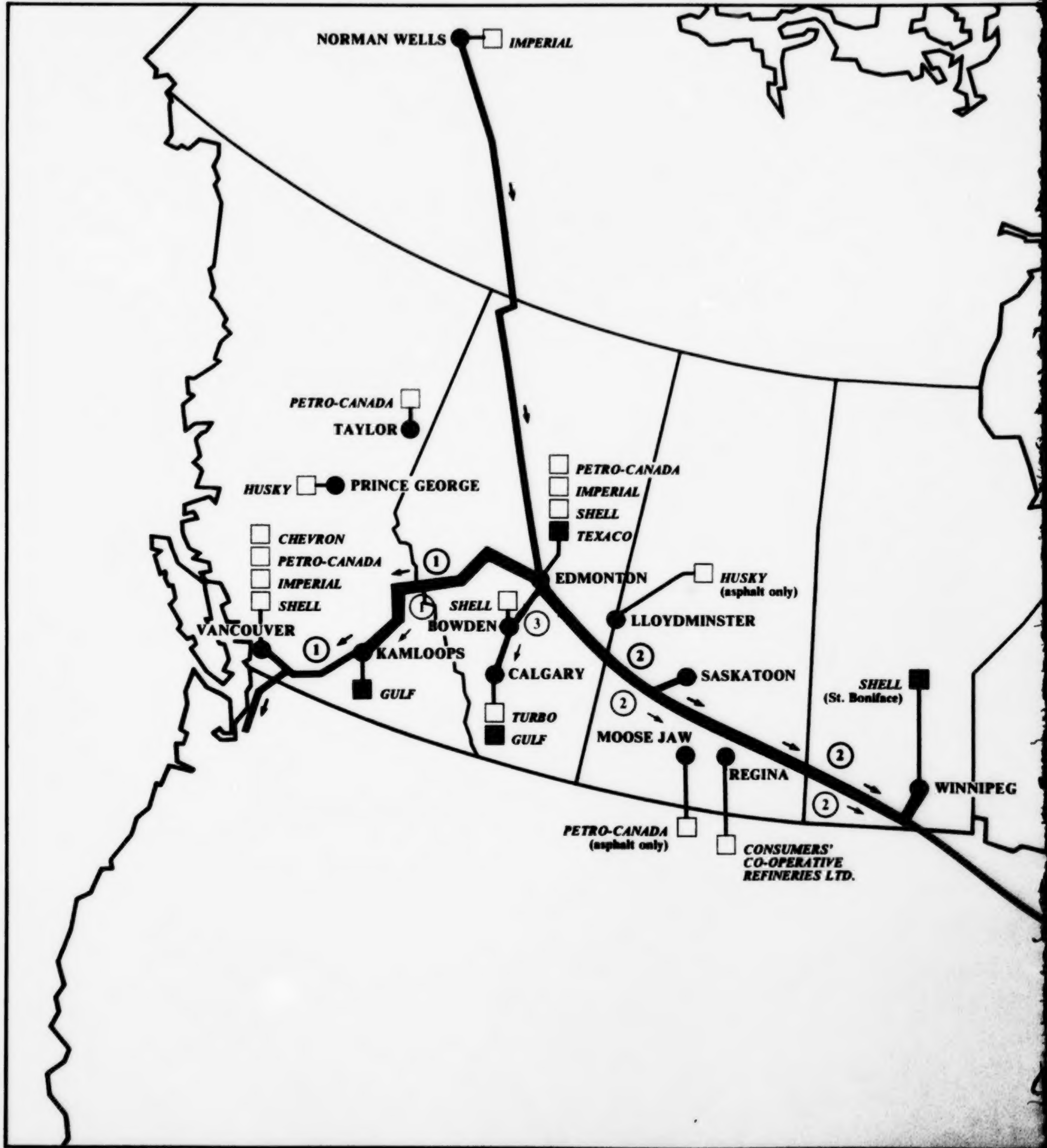
J.M. Collins C.A. Parkinson J.F. Thompson	Manager, Technical Services General Manager, Sales Supervisor, Operations Ethyl Canada Inc., Toronto, Ontario	53
J. Katz	Interested citizen	14
P.J. McNamee	Comptroller Kent Marketing Services Limited, London, Ont.	53-A
A.M. Moore	Professor of Economics University of British Columbia	179-180
J. Mustard	President Mustard Petroleum Ltd. Toronto, Ont.	88
I. Waddell	Member of Parliament Vancouver, B.C.	11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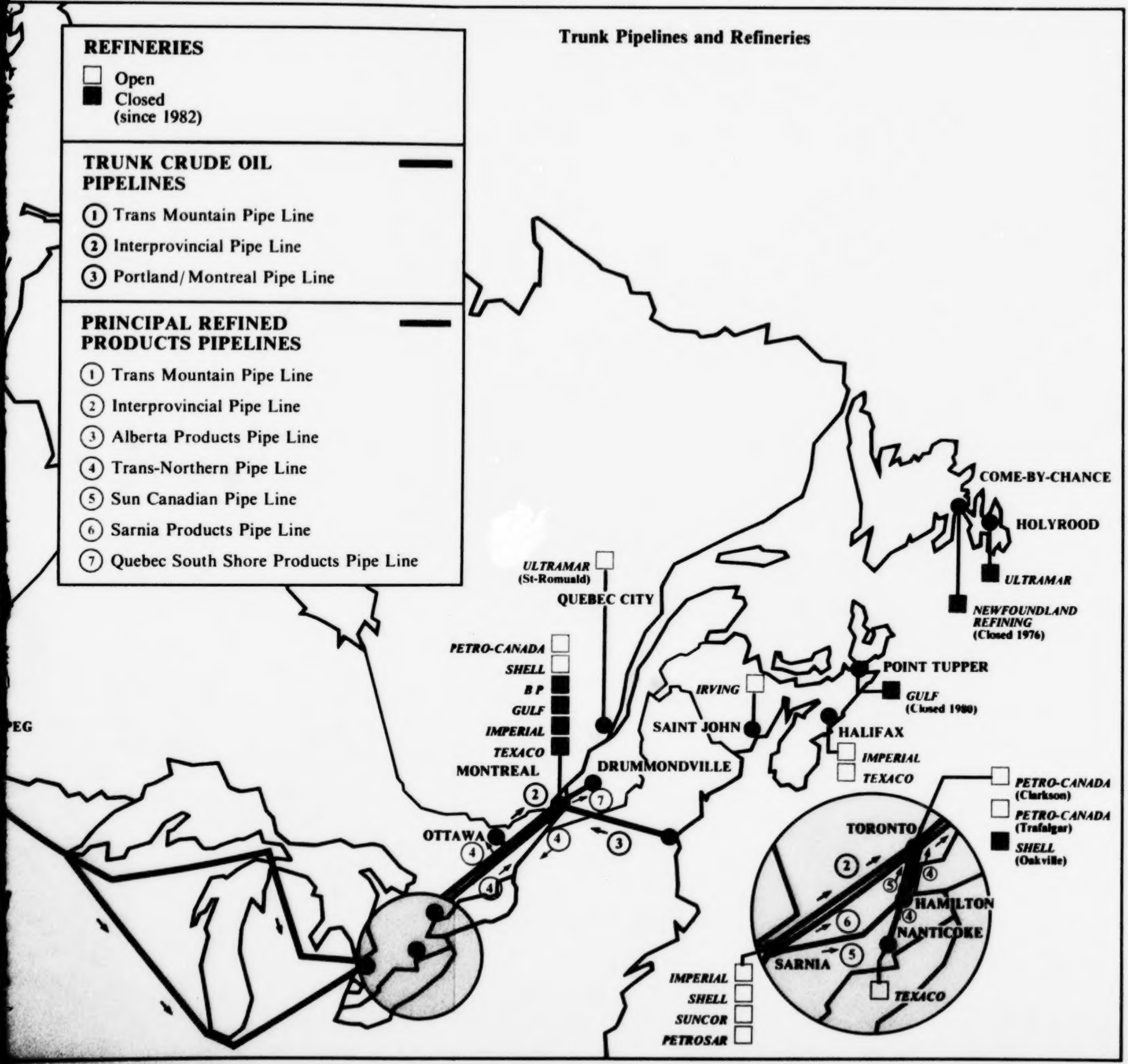

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C

The Usefulness of Statistics Canada Data to Compare Wholesale Prices During the National Oil Policy Period

Until 1964 Statistics Canada combined (for reasons of confidentiality) refined product shipments for Quebec and the Atlantic Provinces. A consistent pattern is displayed in the average per-barrel value of refinery product shipments of each of the major products: the values in Ontario increased relative to those in the Atlantic Provinces plus Quebec. In the case of motor gasoline, before the NOP the per-barrel value of shipments in Quebec plus the Atlantic Provinces was the same as that in Ontario, and the average for 1968-69 of the value of per-barrel shipments was 44¢ higher in Ontario than in the provinces to the east. With respect to light fuel oil, the value of per-barrel shipments started at 6¢ more in Ontario than in the Eastern Provinces, with the differential widening to 58¢ for 1968-69, an increase in the differential of 52¢. From virtual parity, heavy fuel oil went to a 58¢ differential. Figures are also available to compare Quebec and Ontario shipment values between 1964 and 1972. The average values during these years are compared below for the three principal products. The differences are virtually the same for the three products. They are also extremely close to the difference between the crude oil costs to a refinery in Toronto and to one in Montreal, an average of 52¢.[1]

	Ontario	Quebec	Difference
Motor Gasoline	5.11	4.58	0.53[2]
Light Fuel Oil	4.25	3.71	0.54
Heavy Fuel Oil	2.71	2.20	0.51

Source: Tables 49 to 51, Volume II of the Green Book.

---

[1] See Green Book, Volume I, Table A-9. The 15¢ transportation cost allowed for in Table A-9 has been excluded to arrive at the 52¢ figure.

[2] The difference is understated because much more premium gasoline was sold in Quebec than in Ontario.

These figures suggest that the exact difference in crude oil costs was passed on in the shipment value of each product. One difficulty with this interpretation is that it runs counter to expectations about differences in market forces among the products. It is difficult to imagine a persistent difference in prices, net of transportation costs, of heavy fuel oil. It is effectively a homogeneous product. Buyers are well informed and their actions in concert with those of middlemen could be expected to eliminate any price differences not caused by moving product from one market to another. Additionally, it is difficult to believe that the Ontario Government would have acceded to a policy which resulted in such a direct increase in the costs of its industrial base.

In the case of light fuel oil, trademarks appear to have been of less importance than they were in the case of gasoline, and the location of sellers would have been unlikely to enter into the buying decisions of consumers. In spite of numerous acquisitions of independent resellers of light fuel oil by refiners, independents appear to have held a larger share of the light fuel oil market in Eastern and Central Canada than did independent marketers of gasoline. Thus the size of the market open to sales by importers and other brokers was large and could not be surrendered by refiner-marketers to imported product without considerably cost. Although little is known about the price information and the price sensitivity of small retail buyers of light fuel oil, many large industrial and commercial buyers would be likely to respond to small price differences. If they were to hold their market share, refiner-marketers would be under great pressure to meet the prices of other sellers.

Gasoline was a different story. The wholesale market consisted primarily of sales to franchised outlets. The extent to which prices at the DTW level would have to fall in order to meet lower-cost sources of supply would depend on the ability of those using such sources to expand. As discussed in the earlier section on marketing, many independents sold at much lower prices than those found at the majors' franchised outlets. Only a small part of the price difference could be explained by differences in the wholesale cost of gasoline. Whether due to the product differentiation advantages of the franchised outlets, or to the ability of the majors to counter the price competition of the independents through geographically limited price reductions (e.g., by means of support programs), the market share of the independents in Ontario was still modest by the end of the 1960s. Any advantages the independents derived from using imported supply were only a small part of their overall cost advantage and would have been relatively unimportant to their market position. While wholesale prices could not be expected to be immune to the cost of imported product to independents, the market characteristics suggest that the price sensitivity would have been less in the case of gasoline than in that of light fuel oil, and markedly less in comparison with heavy fuel oil.

It is possible that the coincidence of the differences of each of the products and of crude oil is more a reflection of the reporting practices of the companies to Statistics Canada than of differences between Ontario and Quebec in the wholesale prices of the products. As noted in the Green Book,

> The problem with refinery realizations as reported to Statistics Canada under the category of "value of shipments of own manufacture" is that they may not relate to realizations but rather to costs because of the reporting methods allowed. (Volume II, p. 87, note)

Since crude oil was by far the most important source of cost differences between Ontario and Quebec, reporting based on costs rather than on wholesale prices would simply reflect differences in the cost of crude oil. Contrary to the opinion stated in the Green Book,[3] no weight can be given to the Statistics Canada data in trying to determine the effect of the NOP on product prices in Ontario.

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[3] "Even if there are distortions in the wholesale realizations because of [the reporting methods allowed], as long as the distortions *do not differ over time*, a comparison across markets will permit an evaluation of relative performance." (Emphasis added.) (Vol. II, page 87) The difficulty here is precisely that crude oil costs were following different time paths.

D

Evidence Regarding Pass-On of "Overcharge"

One of the most ambitious responses to the pass-on portion of the Director's overcharge allegation consisted of a study by Professor David Shaw, Faculty of Business Administration, University of Western Ontario. This study was financed by Gulf Canada, but it did not participate in its preparation. The approach taken by Professor Shaw was to measure the cost of capital to Gulf and Imperial (the two majors for whom adequate data were considered to be available) and to compare the actual returns with those that would have been required to meet the cost of capital.

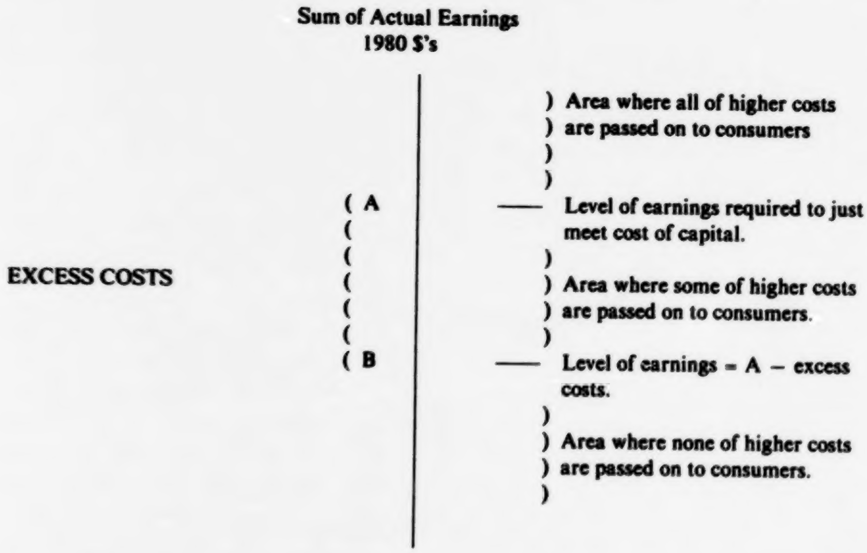
For the purposes of his study, Professor Shaw took the Director's estimate of alleged excess cost to be accurate. It was also assumed that the industry was competitive and that, in the absence of the alleged excess costs, earnings in the long run would just equal those required to meet the costs of capital. Three possible situations followed from the foregoing. They are represented in Figure I.

1. The level of earnings was equal to those required to just meet the cost of capital less the alleged higher costs (shown as "B" in Figure I). At this level of earnings, or below, none of the alleged higher costs were passed on.
2. The level of earnings was higher than in (1), but did not exceed the level of earnings required to meet the cost of capital. (The latter is shown as "A" in Figure I). In this range of earnings (between "A" and "B") part or all of the excess costs were taken to have been passed on, depending on where earnings fell between "A" and "B".
3. The level of earnings was in excess of those required to meet the cost of capital. This would mean that consumers were paying prices even higher than those required to pass on all of the higher costs.

In the results originally presented by Professor Shaw, Gulf's earnings fell below "B" and Imperial's were slightly above that level. In terms of the

FIGURE D-1

Pictorial Representation of the Three Hypotheses Tested by Professor Shaw's Model


Sum of Actual Earnings
1980 $'s
Area where all of higher costs are passed on to consumers
A
Level of earnings required to just meet cost of capital.
EXCESS COSTS
Area where some of higher costs are passed on to consumers.
B
Level of earnings = A − excess costs.
Area where none of higher costs are passed on to consumers.

approach taken, this meant that even if higher costs had been incurred by Gulf none of them were passed on in higher prices, and in the case of Imperial only a small part of any higher costs would have been passed on. If convincing, these are very strong results. In the case of Gulf, and virtually so in the case of Imperial, they deny that the consumer was penalized in the form of higher prices by any higher costs that might have been incurred. If higher consumer prices were all that was at stake, then there would be no need to examine further the allegations of higher cost.

Professor Shaw's basic model, but not his results, was accepted by the Director. An absence of agreement on approach would have allowed a briefer discussion of Professor Shaw's evidence. After cross-examination, a lengthy argument by the Director and several rounds of rebuttal and reply argument, there were two major differences between the parties, as well as others which were not pressed by the Director.

The principal difference between the Director and Professor Shaw relates to his estimates of the cost of capital for Gulf and Imperial. The estimates for equity capital were made through the use of the capital-asset pricing model. Two key steps are required in applying the model. First, the average cost of equity capital must be established and then the extent to which the value of a particular company's shares move with or against an index of share prices must be established. Shares which move counter to the index will benefit from a lower-than-average cost of equity because an investment in their shares permits diversification of portfolios.

The estimates arrived at by Professor Shaw were considerably higher than those actually used by the companies in their decision making, as shown by documentary evidence for both companies, and as confirmed by oral testimony in the case of Imperial.[1] Documentary evidence on the rates used by Shell also supports the conclusion that Professor Shaw's estimates exceeded the rates used by petroleum companies in making investment decisions. The Director has argued that the rates used by the companies in their investment decisions are the appropriate ones to use, and, paraphrasing broadly, not those estimated and subject to error.

It must be recognized that the rates used by management might also be in error. A great deal of judgement enters into the decision regarding the appropriate cost of capital to use in investment decisions. In considering the possibility that management was in error, it must be taken into account that Gulf's and Imperial's major shareholders, their U.S. parents, must have known and approved of the rates used by them. Another factor to consider is that, if management erroneously used too low a rate over as long a period as covered by Shaw's study (1958-1973), this error should have shown up, everything else equal, in a secular decline in share prices.

The effect of using a lower cost of capital is to move line "A" down in Figure I, with a corresponding reduction in "B". The level of earnings above which part or all of the pass-on of excess costs could have occurred is reduced. When Professor Shaw's model was reworked using the rates employed by each of the companies, the actual level of earnings corresponded to 73 per cent of the alleged excess costs being passed on to the consumer in the case of Gulf, and to 85 per cent in the case of Imperial. If the rate used by Imperial, which was higher than Gulf's, is applied to Gulf, then the extent of the pass-on by Gulf is reduced to 57 per cent.

The second major difference between the Director and Professor Shaw concerns the treatment of the alleged overpayment for crude oil and shipping services. The Director has argued that these excess payments were the equivalent of after-tax profits received by the parent, since the parents were able to avoid paying taxes on these receipts of income. In a detailed explanation accompanying his rebuttal argument on remedies, the Director has shown how, in his view, this argument can be incorporated into the calculation of the percentage of alleged excess costs which were passed on. Nevertheless, the Commission considers the matter to be unresolved and the suggested modifications are not accepted.

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[1] Gulf's attempt in writing to reconcile the documentary evidence on Gulf's rate with Professor Shaw's estimate was not convincing.

The fact that earnings fall above "B" in Figure I does not necessarily support the Director's argument that there were excess costs and that they were passed on. The study by Professor Shaw assumed that there were excess costs and that they were at the level estimated by the Director. In terms of Figure I, the effect of a conclusion that excess costs were less (more) than estimated by the Director would be to raise (lower) the level of "B".

There are a number of shortcomings in the application of the model which, in the view of the Commission, vitiates its usefulness for the purposes of the present report. The most serious is that, due to data deficiencies Professor Shaw combined upstream and downstream activities, although all of the overcharges are alleged to have impacted the downstream sector. The results are thus seriously clouded since it is not known what the results would have been if the downstream sector could have been studied separately.[2] Apart from this critical consideration, the accounting treatment of crude oil and natural gas is not easily reconciled with that used for other types of capital with respect to exploration expenses and "depreciation". As a consequence the usefulness of the results are weakened even on a combined basis.

It was a mistake for Professor Shaw to have accepted the Green Book's estimates of the alleged excess costs as a working hypothesis. It entailed a serious error of fact regardless of the actual level of alleged excess costs. In the model employed by Professor Shaw all of the alleged excess costs are assumed to have a direct effect on the oil firms' accounts. This is not always so. The allegation of excess costs and a pass-on to consumers is not equivalent to the hypothesis that all of the alleged excess costs were directly incurred by the oil companies and were then passed on to consumers. In marketing, much of the alleged higher costs of the integrated marketers were, as analyzed by the oil companies, due to higher retail markups and, only to some extent, to higher wholesale costs incurred by oil companies. Whatever the cause of the level of retail markups (e.g., low volumes, mix of inputs), retail costs were incurred by the operators of the retail outlets, and not by the oil companies.[3] These costs fall outside the framework of the model and, therefore, it cannot be used to test whether the alleged higher costs resulted in higher consumer prices. Additionally, only a part of the alleged higher costs resulting from product imports would have appeared in the accounts of the oil companies, because they imported only part of the total.

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[2] It might be argued that the upstream sector is competitive and that the earnings from that sector should, in the long run, just meet the cost of capital. (Different costs of capital apply upstream and downstream due to differences in risk.) This may be a reasonable position for the period of the study, which is relatively brief from the viewpoint of exploration activities, if aggregate industry results are being considered. It is much less reasonable for individual firms, and particularly one such as Imperial, which had already enjoyed considerable success in Canada by 1958.

The model also presents other problems. One is the assumption of long-run competitive equilibrium. The degree of competition was not uniform across the country. If market power in some regions resulted in higher-than-"competitive" returns, this would show up as a pass-on of excess costs. Additionally, the assumption is inconsistent with persisting unused capacity in the retail networks and in crude oil production.

Although pass-on is stressed in the Green Book, it is not the sole issue raised by the alleged excess costs where they entail the use of additional resources and not just a transfer of income. The important questions in marketing, which involve speed of adjustment to changing consumer requirements, are begged by assuming long-run competitive equilibrium.

Apart from the problems already discussed, the amount of work in applying the model and the need to make assumptions at a number of points further reduces confidence in the results. The estimate of the cost of capital was only a part of the work that involved estimates and was subject to error. Considerable manipulation of accounting data is entailed in estimating the level of earnings required to meet the cost of capital. In particular, the capital stock on which the required rate of return is to be earned must be estimated or calculated, with evident problems in applying the methodology to crude oil reserves. There are also remaining disagreements between the Director and Professor Shaw on the appropriate tax rate to be applied (marginal versus average) and on the treatment of deferred taxes. While some of the problems discussed could be overcome with considerable effort, others cannot.

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[3] It might be argued that if retail costs had been lower the oil companies might have been able to raise their wholesale prices, or, where they were landlords, their rents. Whatever the validity of this line of reasoning, it is not the approach of Professor Shaw.

E

Standards Used To Evaluate Prices Paid By Canadian Companies For Imported Crude Oil

(The background information, sources and methodology used in the derivation of third-party prices contained in Tables F-1 to F-12 of Appendix F are reviewed in this Appendix.)

1. Net Offshore Subsidiary Prices

The calculation of the net offshore FOB and CIF prices[1] estimated for Petrofina, Murphy, Irving and Ultramar were based on several assumptions. First, this methodology assumed that the offshore subsidiary's crude oil trading or transportation activities were solely with its parent Canadian company. Only in this manner was it possible to associate its net income and dividends with the markup imposed on crude oil imported into Canada. The net income figure, where available, was more reliable because it represented the markup for a particular year while the dividend figure might include income earned in the previous year(s).[2]

Secondly, these calculations assumed that the markup per year was the same for all the crude oils which were imported during that year. It was also assumed that the markup was constant for all the months within that year; that is, the reliability of the calculations for any one company would tend to be inversely related to the increasing number of crude oils imported and to the number of (monthly) prices reported per year. The latter was not a factor in the 1960s because primarily annual prices were reported.

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[1] All prices and freight rates are in American dollars as per international convention, unless otherwise stated.

[2] Any extraordinary income gains or losses by the offshore subsidiary, such as exchange rate profits or losses or profits on the sub-chartering of vessels, etc., where identifiable, have been deleted from the net income figure because they do not concern the markup over third-party prices.

Thirdly, the calculation of net offshore FOB prices assumed that there was no markup on freight rates or transportation costs. In other words, the offshore subsidiary's markup to its Canadian parent-customer represented a markup on FOB third-party prices only. To the extent that transportation services were also subject to a markup, the estimates of net offshore FOB prices are too low and, therefore, any observable differences between these third-party prices and transfer prices dealing with parent-subsidiary transactions are overstated. Thus, comparisons involving offshore CIF prices are more reliable than those involving offshore FOB prices, except where evidence existed of the actual offshore third-party FOB prices being paid (i.e., Ultramar and Murphy).

Finally, the methodology assumes that the price paid by the offshore subsidiary did not also contain a markup over the third-party price originally paid by the multinational parent corporation. If it did, then these calculations would not reflect the lowest prices available to the non-integrated petroleum companies studied.

(a) The Petrofina Group

Third-party price data were calculated for Petrofina Canada Limited concerning:

(a) Lagomedio/MarLago for 1960 to 1973,

(b) Kuwait 31° API for 1960 and 1979,

(c) Iranian Heavy 31° API for 1961, 1969, 1970, and 1973 to 1976,

(d) Arab Medium 31° API for 1974 and 1981,

(e) Agha Jari/Iranian Light for 1960, 1970 to 1977 and 1979,

(f) Arabian Light for 1970, 1974 to 1976 and 1981 to 1982,

(g) Miscellaneous Venezuelan light crude oils, such as, Lama 32° API for 1960 to 1962; Tia Juana Light 31° API for 1961 and 1965 to 1968; Lago Treco 30° API for 1969 to 1970 and 1981 to 1982,

(h) Nigerian Medium 27° API for 1972 and 31° API Forcados Export Blend for 1974, and

(i) Trinidad 30° API crude oil for 1972.[3]

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[3] Similar price data were also available for various years from 1960 to 1982 for crude oils not covered in Tables F-1 to F-12. These were: Bachaquero, Tobias, Libyan Light, Basrah, Murban, Qatar, Zakum, Safaniya (Arabian Heavy), Arzew, Berrie (Arabian Extra-Light), Isthmus, Kirkuk, Maya and Rumaila. References in this Appendix and in Tables F-5, F-6 and F-12 to MarLago price data for Petrofina also appear under the name Lagomedio/Lagomar.

The data reported for 1960 to 1974 in Exhibit I-16H were the marked-up Canadian purchase or import prices paid by Petrofina Canada rather than the third-party prices actually paid by its parent corporation, Petrofina S.A. (Belgium). The crude oil Petrofina S.A. purchased on a third-party basis was sent to Canada via Pannac Limited of the Bahamas, a wholly owned subsidiary of Petrofina Canada.[4]

Table E-1 contains a breakdown of the revenues of Pannac Limited and dividend/net income per barrel calculations for 1960 to 1975.[5] The dividend and net income per barrel figures were fairly close to each other, with the greatest variation being 6.6¢ in 1967. (The net income figures were not available for 1960 to 1965.) The revenue breakdown, however, shows that sales to Petrofina Canada only accounted for 46 to 57 per cent of Pannac Limited's Gross Income from 1966 to 1972. It was only in 1974 and 1975 that the proportion rose to 81 and 92 per cent, respectively. This would appear to suggest that the Pannac dividend (or net income) per barrel figures, based on world-wide sales activities, could not be used to calculate offshore or third-party prices for the crude oil shipped to Petrofina Canada. However, other evidence indicates that this is not the case.

In Exhibit I-355 (Tab 1) Pannac Limited is described as being used by the Petrofina Group for its world-wide crude oil and petroleum product trading, exchanges and processing deals, etc. According to Exhibit I-355, Petrofina S.A. obtained crude oil at a substantial discount off posted price, but charged Pannac Limited an inflated (i.e., marked-up) price for the Lagomedio which Pannac Limited then resold to Petrofina Canada at the same price. Although Pannac did not realize any profit from this transaction, it obtained profits from its other world-wide activities. The tax-free dividends which it remitted to its parent, Petrofina Canada, were set at a level which represented the profit or markup that Petrofina S.A. realized on the crude oil which was sent to Canada.

The reliability of the Exhibit I-355 evidence was supported by the following information concerning Petrofina Canada's offshore prices for 1966 to 1970.

A parallel decline was observed in both Petrofina Canada's per barrel landed prices (33¢) or FOB prices (31¢) and Pannac Limited's net income

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[4] Pannac Limited which was incorporated in December 1959, was also used to ship crude oil to Europe, as well as for other activities. See Transcript Volume 155, p. 28217.

[5] Table E-1 also contains 1970 to 1975 data on the "Pannac Spread" which was mentioned in Exhibit I-324 at Tabs 1 and 9. The Petrofina witnesses were unable to explain the meaning of these figures.

TABLE E-1

Financial Data for Pannac Limited, 1960 to 1975

	(US $ Millions)					(Barrels)	(US Cents Per Barrel)		
	Pannac Limited						Pannac Limited		
		Revenues[b] from							
Year	Gross Income[a]	Petrofina Canada	Other Sources	Pannac Dividends to Petrofina Canada[c]	Pannac Limited's Profit or Net Income[a]	Petrofina Canada's Crude Imports[d]	Dividends Per Barrel	Net Income Per Barrel[e]	Spread Per Barrel[f]
1960	n.a.			1.405	n.a.	9,659,210	14.6	n.a.	n.a.
1961	n.a.			9.135	n.a.	10,256,083	89.1	n.a.	n.a.
1962	n.a.			8.200	n.a.	10,626,647	77.2	n.a.	n.a.
1963	n.a.			8.550	n.a.	12,150,352	70.4	n.a.	n.a.
1964	n.a.			9.200	n.a.	11,597,994	79.3	n.a.	n.a.
1965	n.a.			9.750	n.a.	12,275,683	79.4	n.a.	n.a.
1966	84.726	38.752	45.974	11.300	11.627	13,359,667	84.6	87.0	n.a.
1967	82.319	40.500	41.819	8.850	8.061	15,738,985	56.2	51.2 (49.6)	n.a.
1968	95.550	45.095	50.455	9.200	9.619	17,668,969	52.1	54.4	n.a.
1969	96.384	48.938	47.446	10.730	10.973	19,243,365	55.8	57.0	n.a.
1970	98.110	53.659	44.451	12.200	11.928	20,853,415	58.5	57.2	18.6
1971	102.953	65.016	37.937	12.762	13.003	21,480,614	59.4	60.5	34.3
1972	122.788	70.113	52.675	14.100	14.606	21,143,699	66.7	69.1	40.3
1973	n.a.	92.886	n.a.	20.200	20.501	22,141,057	91.7	92.6	55.6
1974	226.085	182.755	43.330	9.900	8.852	16,405,365	60.3	54.0	56.1
1975	324.365	298.013	26.352	7.500	6.709	24,471,067	30.6	27.4	30.0

Notes and Sources:

(a) For Pannac Limited's Gross Operating Income and Profit or Net Income see Exhibit I-324 at Tabs 2 to 8 and Exhibit I-326 (for 1973).

(b) For Pannac's Revenues from Canadian Petrofina see Exhibit I-16H. These revenues were calculated by multiplying the laid down cost or CIF value of each crude oil (converted to US dollars) by the volume imported and summing across the crude oils imported per year. For 1975, see the PCB data found in Exhibit I-126; the loaded volume figures were used to maximize the revenue data.

(c) For Pannac's Dividends to Petrofina Canada see Exhibit I-324 at Tab 1 and Exhibit I-326 (for 1975).

(d) For the number of barrels of crude oil imports by Petrofina Canada see Exhibit I-16H for 1960 to 1974 and Exhibit I-126 for 1975.

(e) The 1967 net income per barrel figure in parentheses reflects an adjustment to deduct an exchange rate profit from net income. See Exhibit I-324 at Tab 2.

(f) The "Pannac Spread" figures for 1970 to 1975 appear in Exhibit I-324 at Tab 1, Serial number 195215 and at Tab 9, serial number 194947.

per barrel (36¢) or dividend/barrel (28¢) from 1966 to 1967. This 1967 price/dividend/net income decline apparently resulted from the Department of National Revenue's adoption in 1967 of the posted price minus 12 per cent formula for determining the fair market value of crude oil imports.

In a December 15, 1968 internal memo[6] on competitive crude oil costs in 1967 and 1968, Imperial Oil reported that it had been informed by its parent corporation that Petrofina had rejected its bid to supply T.J. Medium (26° API) at $1.60 per barrel FOB. The successful bid was believed to have been $1.58 to $1.59 per barrel. The equivalent Lagomedio (32° API) price was believed to be about $1.70. (The addition of 12 cents reflected the usual 2¢ per API degree adjustment between 26° and 32° API crude oils.) The derived offshore FOB prices for Lagomedio imported by Petrofina Canada in 1967 to 1969 were $1.68, $1.71 and $1.68, respectively. These derived prices match Imperial Oil's information of third-party prices available to the Petrofina Group when one considers that the superior credit terms available to Petrofina were estimated by Imperial Oil to be worth about 4¢ per barrel.[7] In a February 7, 1969 memo,[8] Imperial Oil reported that an examination of individual competitor's supply costs indicated that both Petrofina and Ultramar had an advantage of over 30¢ per barrel. Since Imperial Oil's cost for Ceuta 32° API crude oil was $1.98 per barrel in 1969, then Petrofina's comparative price for Lagomedio 32° API crude oil would have been about $1.68. As noted above, the Petrofina derived offshore Lagomedio prices for 1968 and 1969 were $1.71 and $1.68 per barrel. This 30¢ per barrel differential for 1969 was also referred to in Imperial Oil's Eastern Canada study of September 1970 which reported that it had been reduced to 20¢ for early 1970.[9] Imperial Oil's lower Ceuta 32° API crude oil price of $1.88, effective April 1970, when reduced by 20¢, yields a comparative third-party price of $1.68 which is only slightly higher than the $1.65 offshore price derived for Petrofina in 1970.

Therefore, based on the above evidence, reliable estimates of the original third-party prices paid by Petrofina S.A. could be calculated by deducting the Pannac Limited dividend per barrel figures from the Canadian purchase prices reported by Petrofina Canada [in Exhibit I-16H]. Table E-2 provides an example of the calculation of CIF and FOB prices for Lagomedio crude oil from 1960 to 1973. The prices derived for 1961 to 1970 should be

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[6] See Exhibit I-70, p. 113255.

[7] *Ibid.*, pp. 113244 and 113273 to 113274.

[8] Exhibit I-56, p. 123685.

[9] Exhibit I-68, pp. 106593 and 106946.

TABLE E-2

Estimation of Net Offshore FOB and CIF Third-Party Prices for Lagomedio[a] (32.0 to 32.9° API) Crude Oil Paid by the Petrofina Group, 1960 to 1972 (U.S. $ Per Barrel)

	Canadian Purchase Price			Pannac Limited[b]			Net Offshore Prices (32.0 to 32.9°)					
							CIF			FOB		
Year	API	CIF	FOB	Dividends Per Barrel	Net Income Per Barrel	Spread	(1)–(3)	(1)–(4)	(1)–(5)	(2)–(3)	(2)–(4)	(2)–(5)
1960	33.5	2.908	2.609	0.146	n.a.	n.a.	2.742	n.a.	n.a.	2.443	n.a.	n.a.
1961	33.6	2.973	2.607	0.891	n.a.	n.a.	2.062	n.a.	n.a.	1.696	n.a.	n.a.
1962	33.3	2.966	2.601	0.772	n.a.	n.a.	2.174	n.a.	n.a.	1.809	n.a.	n.a.
1963	33.3	2.920	2.559	0.704	n.a.	n.a.	2.196	n.a.	n.a.	1.834	n.a.	n.a.
1964	33.0	2.920	2.549	0.793	n.a.	n.a.	2.107	n.a.	n.a.	1.736	n.a.	n.a.
1965	33.1	2.921	2.560	0.794	n.a.	n.a.	2.107	n.a.	n.a.	1.746	n.a.	n.a.
1966	33.3	2.914	2.571	0.846	0.870	n.a.	2.048	2.024	n.a.	1.681	1.681	n.a.
1967	33.1	2.586	2.262	0.562	0.512	n.a.	2.004	2.054	n.a.	1.680	1.730	n.a.
					(0.496)			(2.070)			(1.746)	
1968	32.9	2.552	2.227	0.521	0.544	n.a.	2.013	2.008	n.a.	1.706	1.683	n.a.
1969	32.8	2.544	2.238	0.558	0.570	n.a.	1.97	1.974	n.a.	1.680	1.668	n.a.
1970	32.8	2.548	2.232	0.585	0.572	0.186	1.947	1.976	2.362	1.647	1.660	2.026
1971	32.5	2.990	2.278	0.594	0.605	0.343	2.386	2.385	2.647	1.684	1.672	1.934
	26.7	2.604*	2.278*				2.116*	2.119	2.381	1.790*	1.792	2.054
1972	26.7	3.897*	2.523*	0.667	0.691	0.403	2.336*	2.326	2.614	1.962*	1.952	2.240
1973	26.8	7.408*	6.699*	0.912	0.926	0.556	6.600*	6.602	6.972	5.891*	5.893	6.263
Column		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)

Notes and Sources:

(a) The Canadian purchase or import prices for Lagomedio paid by Petrofina Canada Limited are from Exhibit I-16H. The Lagomedio prices and the *asterisked* price figures for MarLago 26.7° API in 1971/1972 and 26.8° API in 1973 were adjusted to 32.0 to 32.9° API using the 2¢ per API degree adjustment formula. The Lagomedio prices for 1960 to 1967 were reduced by 2¢ while those for MarLago were increased by 12¢.

(b) The Pannac Limited Dividend/Net Income/Spread per barrel figures are from Table 1.

regarded as the most reliable because Lagomedio accounted for most of the crude oil delivered to Petrofina Canada in those years and because of the above evidence supporting the levels of Petrofina's offshore prices for 1966 to 1970.

In December 1974, Petrofina Canada officials noted that the Petroleum Compensation Board (PCB) authorities[10] were considering whether they should require Petrofina Canada to change its practice of reporting the FOB prices charged by Petrofina S.A. to Pannac Limited rather than the prices which Pannac charged Petrofina Canada. The Commission does not know whether Petrofina Canada changed its reporting practice in 1974/1975.[11] However, the PCB prices for those years, when reduced by the Pannac dividend per barrel, are comparable to other third-party prices. The net offshore figures calculated from the annual 1974 price data found in Exhibit I-16H did not match the monthly PCB data for 1974 even when it was reduced by the Pannac dividend/barrel. Accordingly, the usefulness of that particular Exhibit I-16H information is questionable.

It was only possible to identify actual freight costs for 1967. In Exhibit M-529 (Tab 1, p. 201998), a Petrofina Canada official is reported to have stated that its transportation costs from Punta de Palmas, Venezuela to Portland were 19¢ or Intascale[12] less 42 per cent.[13] However, the freight costs billed to Petrofina Canada by Pannac were reported at 31¢ [in Exhibit I-16H]. Therefore, Petrofina Canada's reported freight costs also contained a significant markup over third-party freight rates paid by the Petrofina Group in 1967. However, the above evidence concerning the reliability of 1966 to 1970 offshore prices for Lagomedio indicated that the calculations of FOB prices for that crude oil derived by deducting the dividend per barrel received from Pannac were not affected.

Aside from the estimates of offshore prices for 1960 to 1975 for Lagomedio and the other crude oils listed above, FOB, freight and CIF data reported to the PCB were available.[14] Since Pannac Limited was mentioned on the PCB data sheets up to 1979, it appears that offshore trading activity persisted until 1978. The Petrofina Canada witnesses were uncertain about the impact this might have had on Petrofina Canada's prices. According to its supply contract with Pannac, Petrofina Canada from July 1, 1973 to December 1978 was to pay the higher of (a) the posted price, or (b) its supplier's costs plus 2 per cent. Therefore it was possible that Pannac added a service fee of 2 per cent on the third-party prices it paid or the transfer prices it was charged by Petrofina S.A.[15]

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[10] At that time, the Oil Import Compensation Program was directed by the Energy Supplies Allocation Board. Over much of the succeeding period, the Petroleum Compensation Board administered the program. See Exhibit I-324 at Tab 8, p. 194880.

[11] The Petrofina witnesses suggested that there was little difference between the two sets of prices because of the crude oil market pricing situation at that time. See Transcript Volume 155, p. 28262.

[12] See Section 4(a) below for an explanation of Intascale.

[13] In its December 1965 Annual Report, Petrofina Canada noted that it planned to start using larger ships of 60,000 tons in 1966.

In summary, the net offshore prices for the Petrofina Group in which the Commission had the greatest confidence for its purposes were for 1961 to 1970 for Lagomedio (see Tables F-5, F-6 and F-12).[16] The estimates for Lagomedio in 1960 and MarLago in 1971 to 1973 and for other crude oil types in 1960 to 1970 might be considered less reliable because they were based not only on data involving many crude oil types, but also because they involved crude oil types from both Venezuela and the Middle East. Because freight costs for Middle East crude oil represented a larger proportion of the total delivered cost at Portland than for Venezuelan crude oil, any general dividend-based markup, when used to derive reduced net offshore prices in such circumstances, would produce Venezuelan crude oil CIF and FOB prices which were biased downwards and Middle East crude oil prices which were biased upwards. (Because a relatively high price was derived for Lagomedio in 1960, it was also included in tables in the body of the Report.) From 1971 to 1975, Venezuelan imports were so low that the Middle East net offshore estimates for these years were less affected by this problem. However for 1971 to 1973 the greater number of price changes within a year made comparisons difficult between Petrofina's average annual price data and monthly prices reported by other companies. For 1974 to 1982, monthly prices were available from the data which Petrofina filed with the PCB. The 1974 to 1975 PCB prices need to be adjusted by deducting the Pannac dividend per barrel to derive the offshore third-party price. For 1976 to 1978, a service fee of 2 per cent should be deducted if PCB prices are in excess of posted price or Official Government Selling Price (OGSP).

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[14] See Exhibits I-126 for 1974 to 1979 and I-114 Confidential for 1980 to 1982 (May).

[15] See Exhibit I-324 at Tab 11.

[16] The prices calculated in 1961 to 1970 for other Venezuelan crude oils, such as Lama, T.J. Light and MarLago should be considered only slightly less reliable than Lagomedio.

(b) The Murphy Oil Group

Third-party price data involving the Murphy Oil Group of companies[17] were available concerning:

(a) Iranian Light for 1965 to 1974 and 1976 to 1977,

(b) Lagomedio and Lot 17 Venezuelan light crude oil for 1970, and

(c) Nigerian Forcados Export Blend for 1973.[18]

Tables F-3 and F-4 contain three sets of third-party prices for Iranian Light crude oil for the Murphy Oil Group. One set followed the prices found in the CIF contracts with the BP Group from 1965 to 1973. Another set of prices were based on BP and Esso International FOB prices and third-party freight costs paid by Murphy for 1968 to 1970. The third set of prices were net offshore prices which were derived from the reported Canadian purchase prices paid by Murphy Oil Quebec Limited (renamed Spur Oil Ltd. as of 1976) by subtracting either the dividend/barrel or the net income/barrel figure reported for 1970 to 1975 by Tepwin Company Limited, the offshore crude oil trading subsidiary. Tables F-5, F-6 and F-9 contain similar data for Lagomedio and Lot 17, a Venezuelan light crude oil and Nigerian Forcados Blend for February and March 1970 and November 1973, respectively.

(i) BP and Esso International Contract Third-Party Prices

Murphy Oil Quebec Limited initially purchased Iranian Light crude oil on a Montreal CIF basis from BP Canada Ltd. under a five-year contract running from May 1, 1965 to April 1970.[19] (The crude oil was processed at BP's Montreal refinery under a corresponding five-year processing agreement with an evergreen clause allowing the period to be extended to April 30, 1979.) Under these crude oil sales and processing agreements, Murphy had the option of substituting its own proprietary Middle East crude oil (i.e., Sassan or Iranian Offshore Light crude oil), or any crude oil which was exchanged for this proprietary crude oil. It could also either transport that crude oil in its own tankers or have the BP Group do so at Intascale less 45 per cent. The initial Montreal delivered price was $2.1425, made up of $2.11[20] plus Montreal wharfage and harbour dues of $0.0325 ($0.035 Canadian). The FOB component was $1.35 and was fixed to April 30, 1968. A May 3, 1968[21] interim agreement allowed Murphy to purchase a fixed quantity of Iranian Light on an FOB basis at $1.33 from June 1 to October 31, 1968 if its proprietary Sassan crude oil was not yet available for shipment to Canada. On October 23, 1968, this price change was formalized in an amendment to the original five-year contract.[22] As of December 1, 1967 the Montreal CIF and FOB prices were reduced to $2.09 (or $2.1225 including harbour dues) and $1.33, respectively.

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[17] The Murphy Oil Group of companies has Murphy Oil Corporation (of Eldorado, Arkansas) as the parent corporation. Murphy Oil Trading Company (of Delaware) was a wholly owned subsidiary engaged in crude oil trading activities. Murphy Oil Company Ltd. (of Calgary) was owned 78 per cent by the parent company. It, in turn, owned 100 per cent of Murphy Oil Quebec Ltd. (renamed Spur Oil Ltd. in January 1976) and Tepwin Company Limited (of Bermuda). After the establishment of Tepwin, Murphy Oil Trading was split up into Murphy Oil (Western) Trading Co. and Murphy Oil (Eastern) Trading Co. for U.S. and European crude oil trading activities, respectively.

[18] Similar price data are also available, for various years between 1970 and 1975, on crude oils not covered in Tables F-1 to F-12. These are: Sassan, Zakum, Safaniya and Murban. See Exhibit I-375D.

[19] See Exhibit I-289, Tabs 7 and 8.

In anticipation of shipping the Murphy Oil Group's own crude oil to Canada, Murphy Oil Trading Company (of Delaware), on March 28, 1968, entered into a contract of affreightment with an Esso International company called Associated Bulk Carriers Ltd. (of Bermuda) for the period July 1, 1968 to December 30, 1970.[23] The contract called for tanker transportation to Portland at Intascale less 62.5 per cent from the Persian Gulf[24] and Intascale less 57.5 per cent from North Africa for tankers of 35,000 to 65,000 tons. On August 2, 1968[25] Murphy Oil Trading agreed to supply Murphy Oil Quebec with Iranian Light oil or suitable substitute crude oils at a Portland CIF price of $1.9876[26] (plus any subsequent increases in Host Government Take) for the period August 1, 1968 to April 30, 1973, with ocean loss, insurance, wharfage and harbour dues and any penalties incurred under the provisions of the BP processing agreement being paid by Murphy Oil Trading.[27]

It is not altogether clear when direct tanker shipments of crude oil to Montreal were superseded by shipments via the Portland pipeline. For comparative purposes, an equivalent Portland CIF price was calculated by subtracting the terminal (i.e., wharfage and harbour dues) and pipeline tariffs[28] from BP's $2.1425 and $2.1225 Montreal CIF prices effective, respectively, prior to December 1, 1967 and thereafter to April 30, 1970 (see Table F-4). It was also not clear whether BP did in fact sell crude oil to Murphy on a CIF basis from July 1, 1968 to April 1970.[29] Since Murphy's own transportation costs under its contract of affreightment, at Intascale less 62.5 per cent or 49.9¢ in 1968 and 57.4¢ in 1969/1970,[30] was lower than the implicit freight rate of 68.1¢ under the BP CIF contract and that contract's freight option at Intascale less 45 per cent, Murphy had an incentive to transport crude oil itself. Murphy's 1969/1970 volumes of crude oil imports also closely matched the contracted tanker capacity under its contract of affreightment. Moreover, an exhibit prepared for the tax reassessment litigation involving Murphy[31] shows Iranian Light FOB prices of $1.32, $1.33, $1.31 from April to July 1969 and $1.27[32] from August 1969 to March 7, 1970. Freight rates were consistently given at $0.574 or $0.575. This evidence and the statements of Murphy Oil witnesses indicate that Murphy was buying on FOB terms from BP Trading up to July 1969 and then from Esso International from August 1969 to 1970, likely on a swap basis for its Sassan crude oil.[33] Murphy Oil relied on Iranian Light because its Sassan crude oil was found to be unacceptable to BP Canada after a few cargoes were imported in late 1968 and early 1969.

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[20] The $2.11 price covered insurance and ocean loss.

[21] See Tab 15 of Book I of Exhibits in *Spur Oil Ltd. v. the Queen*, 81 DTC 5168. (Federal Court, Trial Division)

[22] *Ibid.*, Tab 22 of Book I of Exhibits.

[23] *Ibid.*, Tab 12 of Book I of Exhibits.

[24] The lifting ports mentioned were Kharg Island and Lavan Island (i.e., for Iranian Light and Sassan Offshore Light crude oil, respectively).

[25] See Exhibit I-302.

[26] This was lower than the CIF Portland price of $2.02 available from BP. This was derived from the CIF Montreal price of $2.1225 by deducting the pipeline fees from Exhibit I-161.

[27] This contract was superseded by the Tepwin contract of February 1, 1970. See Exhibit I-375D, item 8.

Several crude oil-producing companies had made offers to Murphy in 1969/1970.[34] Esso International offered to purchase 7000 b/d of Murphy's Sassan crude oil at $1.22 FOB if Murphy would purchase 14,000 b/d of its Iranian Light at $1.27 FOB from June to November 1969. BP initially offered Murphy Iranian Light at $1.27 FOB in April 1970. At the same time, Shell offered a CIF Portland price of $1.97 for Iranian Light (or $2.10 for Libyan Es Sider crude) from January 1971 to June 30, 1973. In May 1970, BP proposed CIF Portland prices of $2.09 from January 1, 1971 to June 30, 1971; $2.05 from July 1, 1971 to June 30, 1972 and $2.07 from July 1, 1972 to April 30, 1973 with a renegotiable price for the May 1, 1973 to

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[28] See Exhibit I-161

[29] *Op.cit., Spur Oil Ltd. v. The Queen,* at Tab 21.2 of Book I of Exhibits reports that Murphy accepted a shipment of Iranian Light at $2.13 CIF Montreal for September 1968 at BP's request.

[30] The 1968 freight figure of 49.9¢ is based on using the Intascale flat rate from Ras Tanura (see section 4(b)). The figure of 57.4¢ was reported in *ibid.*, Tab 178 of Book III of Exhibits.

[31] *Ibid.*, Tab 178 of Book III of Exhibits.

[32] There was also one price of $1.28 in November 1969.

[33] See Transcript Volume 102 at pp. 19206-19207.

[34] *Ibid.*, Tabs 28, 65, 68 and 71 of Book I of Exhibits.

1976 period. Shell (via Asiatic Petroleum) in June 1970 was prepared to sell Abu Dhabi (Murban, 39.0 to 39.9° API) crude oil for $1.45 FOB Jebel Dhanna or $2.10 CIF Portland from July 1970 to December 1976.

Following these negotiations between BP and Murphy, an agreement was arrived at on June 4, 1970 whereby the "third-party FOB market" price for Iranian Light was set at $1.246. Negotiations were not finalized until September 17, 1971 at which time an agreement covering the period January 1, 1971 to December 31, 1975[35] was signed. The FOB price was to be the June 4, 1970 "negotiated market price" plus any subsequent increases in Host Government Take reported for Zakum crude oil while the freight rate was fixed at $0.812 (or current Worldscale 65) until April 30, 1973[36] and at whatever level Worldscale 65 was at in May 1973, thereafter.[37] The contract also recognized that Murphy had exercised its option in November 1970, to request the right to lift an extra 625,860 barrels of crude oil per year under the June 4, 1970 price formula, but stipulated in turn, that the freight rate for the first 625,860 barrels lifted between May 1971 and April 30, 1972 and in the same period for 1972 to 1973 would be transported at Worldscale 100 or $1.249/barrel in order to take account of the increase in freight rates that had occurred in late 1970.[38] It should be noted that under this new contract Iranian Light was almost completely replaced after early 1972 by other crude oils which were more suitable to the sulphur content restrictions imposed by the City of Montreal and also to the product output mix desired by Murphy Oil. The crude oil was delivered on a C&F (i.e. excluding insurance) basis to Portland by the BP Group.

For the 1971 to April 1973 BP contract FOB prices on Table F-3, the June 4, 1970 "negotiated FOB market" price for Iranian Light was adjusted for increases in Zakum's Host Government Take.[39] The corresponding CIF Portland prices on Table F-4 were calculated by adding on the freight rate of $0.812 plus any increases in port dues ($0.016 on October 1, 1972) and allowing for 1 per cent of the C&F price for insurance costs.[40] Calculations for May 1, 1973 to 1976 were not possible due to a lack of evidence on the FOB prices and freight rates negotiated between the Murphy Oil and BP Groups for this period.

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[35] See Exhibit I-375A. This was subsequently extended to December 31, 1976. The processing agreement had been also extended on April 6, 1971 to April 30, 1973. In the Murphy Oil Company (Calgary) Annual Report for December 31, 1971, it was stated that this agreement had been extended three years to April 1976. The 1973 Annual Report stated that an extension to April 1978 was effective May 1, 1974.

[36] The ocean freight component could be increased subject to increases in port dues at Portland or the loading ports. An increase of 1.6¢ in port dues for October 1, 1972 was reported in *op.cit.*, *Spur Oil Ltd. v. The Queen*, Tab 191 of Book III of Exhibits.

[37] See Section 4(a) below for an explanation of Worldscale.

[38] Since Zakum crude oil was imported prior to Iranian Light crude oil in 1971 and 1972, the Worldscale 100 freight rate was applicable to only a negligible volume of the Iranian Light imported (i.e., in June to August of 1971). These Worldscale 100 prices reflected spot freight rates which were regarded as temporary (i.e., to be in effect only to April 30, 1973) because Worldscale 65 was to be in effect thereafter until the end of 1975.

(ii) Estimated CIF Third-Party Prices for the Murphy Group Based on Contract FOB Prices and Third-Party Freight Costs

The second set of prices reported for the Murphy Oil Group were based on adding third-party freight costs to the FOB prices available from BP and Esso International. From July 1968 to March 1970, it was possible to calculate CIF Portland prices for Iranian Light oil (see Table F-4) by adding the Murphy Oil Group's own transportation costs[41] to the BP FOB contract price for 1968 to 1970 and the Esso International FOB price for August 1969 to 1970 and by including 1 per cent of the C&F price for insurance costs. For Lagomedio 32.3° API and Lot 17 34.8° API light Venezuelan crude oils, similar price data are available for February and March 1970, respectively (see Tables F-5, F-6 and F-12). Under the July 1, 1968 to December 31, 1970 contract of affreightment, the ocean freight rate to Portland from the Persian Gulf (Kharg Island) for Iranian Light 34° API was 57.4¢ (Intascale less 62.5 per cent or Worldscale 46.6). From Punta de Palmas, Venezuela, the rates given in February and March 1970 were 22.5¢ and 22.2¢ for Lagomedio 32.3° API and Venezuelan Lot 17 34.8° API, respectively (Intascale less 57.5 per cent or Worldscale 81). The actual monthly FOB prices and transportation costs incurred by Murphy Oil Trading Company in supplying Murphy Oil Quebec for 1969 to March 1970 were reported, as mentioned above, in an exhibit filed during the tax reassessment litigation involving Murphy. From April to October 1970, the $1.27 FOB price was used for Iranian Light while for November/December it was increased by the Host Government Take (HGT) adjustment for Iranian Light[42] to $1.36.

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[39] The increases in Host Government Take (HGT) for Zakum were given in *op.cit., Spur Oil Ltd. v. The Queen*, Tab 191 for November 1970 to January 21, 1972. The changes for January and April 1973 were based on changes for Murban crude oil and Umm Shaif crude oil, also originating from Abu Dhabi, as reported in *International Crude Oil and Product Prices* (ICOPP).

[40] As suggested by Newton. See Section 4(b) below.

[41] One cargo was imported in September 1969 at a freight rate of 99¢ for a CIF price of $2.28. A freight rate of $1.279 for a February 1969 cargo of Sassan was also reported for 1969.

[42] The earlier BP contract allowed for price changes based on HGT changes in Iranian Light; it is assumed that the Esso International contract also had this provision.

(iii) Estimated Offshore Third-Party Prices for the Murphy Group

From February 1970 to 1975, Tepwin Company Limited, a wholly owned Bermuda subsidiary of Murphy Oil Company Ltd., Calgary, acted as an intermediary between Murphy Oil Quebec and the Murphy Oil Group companies for crude oil and transportation services.

Table E-3 contains the financial data on Tepwin's income and dividends for 1970 to 1975, along with calculations on a per barrel basis. Table E-4 provides an example of the manner in which Canadian purchase or import prices for Iranian Light were converted to net offshore prices by subtracting the net income or dividend/barrel and reported markup per barrel.[43] Unlike the Petrofina Canada/Pannac situation, Tepwin's only revenue source was Murphy Oil Quebec.[44] Therefore, Tepwin's income and dividends would appear to have entirely reflected the markup which that offshore subsidiary put on the third-party prices and freight rates originally paid by the Murphy Oil Group. Moreover, the markup appears to have been applied equally across all types of crude oils.[45]

However, for 1970 there appears to have been an additional markup of 12¢ on the Iranian Light FOB price charged by Murphy Oil Trading to Tepwin. On February 1, 1970, Tepwin entered into a sub-chartering agreement[46] with Murphy Oil Trading for 12 to 20 voyages commencing on February 1, 1970.[47] The freight rates to Portland from the Persian Gulf were to be at Worldscale 46.6 while those from Venezuela were to be at Worldscale 81.0. On the same date, these two parties signed a crude oil sales agreement[48] for February 1, 1970 to December 31, 1970, with FOB prices of $1.39 for Iranian Light and $1.75 for both Lagomedio and Lot 17 Venezue-

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[43] The dividend figures were taken from Exhibit I-301 while the number of barrels imported by Murphy Oil Quebec are from Exhibit I-375D (see Table E-1). The net income figures come from *op.cit., Spur Oil Ltd. v. The Queen*, Tab 175 of Book II of Exhibits and were converted from Canadian dollar data. The Canadian purchase prices are CIF Portland prices found also in Exhibit I-375D. On page 3 of the October 13, 1983 responses to undertakings (I-375D) Murphy Oil reported that the Tepwin markup was about 25¢ in 1970, 52¢ in 1971/1972 and 77¢ in 1973 to 1975. See Table E-3 for a comparison with net income per barrel and dividend per barrel figures calculated using Tepwin financial data.

[44] The one exception was a profit of $838,545 earned in February 1971 on a tanker sub-charter which was received by Murphy Oil (Calgary) in the form of dividends.

[45] This observation is based on calculations using 1970/1971 data found in *op.cit., Spur Oil Ltd. v. The Queen*, Tab 7 of Separate Book of Exhibits.

[46] *Op.cit., Spur Oil Ltd. v. The Queen*, Tab 42 of Book I of Exhibits.

[47] This contract of affreightment was extended to February 28, 1971 by a letter of agreement between Murphy Oil Trading Co. (Western) and Tepwin on December 4, 1970. See *ibid*, list of exhibits for appeal decision.

[48] *Ibid.*, Tab 43, Book I of Exhibits.

TABLE E-3

Financial Data for Tepwin Company Limited, 1970 to 1975[d]

	(U.S. dollars)				(U.S. Cents Per Barrel)		
	Gross Income	Net Income[a]	Dividends Paid to Murphy Oil[d]	Number of Barrels Imported into Canada[b]	Gross Income Per Barrel	Net Income Per Barrel	Dividend Per Barrel[c]
1970	1,546,864	1,540,111	1,600,283	5,492,182	28.2	28.1	29.1 (25)
1971	2,911,873	2,899,935	3,522,818	6,011,091	48.4	48.4	58.6 (52) 44.7*
1972	3,550,395	3,537,712	3,396,952	7,180,938	49.4	49.3	47.3 (52)
1973	3,861,854	3,823,982	3,922,867	6,601,184	58.5	57.9	59.4 (77)
1974	4,261,828	4,207,745	4,038,000	5,894,957	72.3	71.4	68.5 (77)
1975	4,060,829	3,996,198	n.a.	6,487,390	62.6	61.6	(77)

Notes and Sources:

(a) Net Income is Gross Income net of General and Administrative Expenses.

(b) The number of barrels of crude oil imported were taken from Exhibit I-375D. In 1970, imports of 1,275,265 barrels of crude oil under the previous Murphy Oil Trading Corporation contract were excluded. The imports shown above concern the Tepwin contract only.

(c) The figures in parentheses are those reported in Exhibit I-375D, page 3 of the October 13, 1983 responses to undertakings. The *asterisked* figure for 1971 is the dividend per barrel figure adjusted to subtract the $838,545 profit on a tanker sub-charter which was received in the form of dividends by Murphy Oil (Calgary).

(d) The dividend figures are from Exhibit I-301. The remaining Tepwin financial data are from Exhibit 175 (Book II of Exhibits) in *Spur Oil Ltd. v. The Queen*, Federal Court, Trial Division, 81 DTC 5168; these were originally in Canadian dollars.

lan crude oil (plus any increases in Host Government Take). This $1.39 FOB price is 12¢ above the $1.27 price which Murphy Oil Trading paid to Esso International from August 1969 to October 1970. (The Worldscale freight rates match the Intascale rates negotiated with Associated Bulk Carriers Ltd.) If the same markup were applied to the Venezuelan crude oil, then the original offshore price to the Murphy Group would be $1.63 for Lagomedio in 1970.

Table E-4 also contains a comparison of the estimated net offshore prices with the prices calculated using the Esso International FOB prices and the Murphy Oil Group's transportation costs to Portland from the Persian Gulf for 1970 and the BP contract CIF prices for 1971 to April 1973. The net offshore prices were higher than the original third-party contract prices in 1970 reflecting the 12¢ per barrel markup mentioned above. The June to August 1, 1971 offshore prices were also higher but only because they incorporated the Worldscale 100 freight rate of $1.249 as stipulated under the BP contract for a limited volume of crude oil; that is, if BP contract prices ($2.924) with the Worldscale 100 rate ($1.249) were also used, higher offshore prices would not be observed for these months. The August 7 to November 1971 and January/February 1972 estimated offshore delivered prices were actually slightly lower than the contract prices. This anomaly was likely due to errors caused by reconverting Canadian to American dollars.

Of the various methods used in Table E-4 to derive net offshore prices, the subtraction of the net income per barrel generally provided prices which more closely matched the BP contract prices for 1971 to 1972. The dividend per barrel method also produced close approximations while the markup per barrel method based on Murphy Oil's own estimates provided more divergent prices. Accordingly the prices derived using the net income per barrel method were used in Tables F-3 and F-4 for Iranian Light and Table F-9 for Nigerian Forcados Export Blend. The net offshore CIF prices for Iranian Light were converted to FOB prices by deducting the freight rate of $0.574 for 1970, $0.812 for 1971 to September 1971 and $0.828 (including the increase in port dues of $0.016 in October 1972) for October 1972 to April 1973. The February and March 1974 FOB prices were derived from CIF prices using the freight data ($2.04 and $2.45) reported to the PCB. For 1974, the FOB price reported to the PCB[49] was reduced by the Tepwin net income per barrel figure for that year. No freight data were available to calculate the FOB offshore price for Nigerian Forcados in November 1973.

For 1976/1977, third-party price data for Iranian Light were available from the CIF and FOB price information which Murphy filed with the

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[49] See Exhibits I-114 Confidential and I-126.

TABLE E-4

Comparison of Murphy Oil's Estimated Net Offshore CIF Prices, Portland With Contract CIF Prices For Iranian Light Crude Oil, 1970 to 1974 (U.S. $ Per Barrel)

Delivery Dates	Canadian Purchase CIF Price[a]	Tepwin[c]			Net Offshore Prices				Contract CIF Prices[d]	Markup Over Contract Prices[e]			
		Net Income	Dividend	Markup	(1)–(2)	(1)–(3)	(1)–(4)	(1)–(3)*		(5)–(9)	(6)–(9)	(7)–(9)	(8)–(9)*
1970[b]													
February									1.862				
March													
April 15	2.25	0.281	0.291	0.25	1.969	1.959	2.00			0.107	0.097	0.138	
May 4	"	"	"	"									
June 4	"	"	"	"									
June 30	"	"	"	"									
July 31	"	"	"	"									
Aug. 19	"	"	"	"									
Sept. 20	"	"	"	"									
Oct. 8	"	"	"	"									
Nov. 14	"	"	"	"					1.949	0.020	0.010	0.051	
Dec. 5	"	"	"	"									
1971													
January									2.145				
February									2.418				
March													
April													
May 26	2.894	0.484	0.586	0.52	2.410	2.308	2.374	2.447		(0.008)	(0.111)	(0.044)	0.029
June 3	3.330	"	(0.447*)	"	2.846	2.744	2.81	2.883	2.483*	0.428	0.326	0.392	0.465
July 20	3.311	"	"	"	2.827	2.725	2.791	2.864	(2.924)	0.344	0.242	0.308	0.381
Aug. 1	3.196	"	"	"	2.712	2.61	2.676	2.749		0.229	0.127	0.193	0.266
Aug. 7	2.956	"	"	"	2.472	2.37	2.436	2.509		(0.011)	(0.113)	(0.047)	0.026
Sept. 12	2.957	"	"	"	2.473	2.371	2.437	2.510		(0.010)	(0.112)	(0.046)	0.027
Oct. 7	2.968	"	"	"	2.484	2.382	2.448	2.521		(0.001)	(0.101)	(0.035)	0.038
Oct. 23	"	"	"	"	"	"	"	"		"	"	"	"
Nov. 21	"	"	"	"	"	"	"	"		"	"	"	"
Column	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)

TABLE E-4 (cont'd)

Comparison of Murphy Oil's Estimated Net Offshore CIF Prices, Portland With Contract CIF Prices For Iranian Light Crude Oil, 1970 to 1974 (U.S. $ Per Barrel)

Delivery Dates	Canadian Purchase CIF Price[a]	Tepwin[c]			Net Offshore Prices				Contract CIF Prices[d]	Markup Over Contract Prices[e]			
		Net Income	Dividend	Markup	(1)–(2)	(1)–(3)	(1)–(4)	(1)–(3)*		(5)–(9)	(6)–(9)	(7)–(9)	(8)–(9)*
1972													
Jan. 19	2.968	0.493	0.473	0.52	2.475	2.495	2.448		2.483*	(0.008)	0.012	(0.035)	
Jan. 21	"	"	"	"	"	"	"		2.604	"	"	"	
Feb. 13	2.975	"	"	"	2.482	2.502	2.455		2.604	(0.001)	(0.019)	(0.028)	
March													
April													
May													
June													
July													
August													
September													
October										2.620			
November													
December													
1973													
January									2.69				
February													
March													
April									2.784				
May													
June													
July													
August													
September													
October													
November													
Dec. 19	6.231	0.579	0.594	0.77	5.652	5.637	5.461		n.a.				
Column	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)

Delivery Dates	Canadian Purchase CIF Price[a]	Tepwin[c]			Net Offshore Prices				Contract CIF Prices[d]	Markup Over Contract Prices[e]			
		Net Income	Dividend	Markup	(1)–(2)	(1)–(3)	(1)–(4)	(1)–(3)*		(5)–(9)	(6)–(9)	(7)–(9)	(8)–(9)*
1974													
Jan. 10	6.171	0.714	0.685	0.77	5.457	5.486	5.401		n.a.				
Feb. 26	12.080	"	"	"	11.366	11.395	11.31						
Mar. 12	12.482	"	"	"	11.768	11.797	11.712						
April													
May													
June													
July													
August													
September													
October													
November													
December													
Column	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)

Notes and Sources:

(a) The Portland CIF Canadian purchase or import prices paid by Murphy Oil Quebec are from Exhibit I-375D.

(b) In 1970, imports of 1,275,265 barrels under the previous Murphy Oil Trading Corporation contract were excluded.

(c) The Tepwin Net Income/Dividend/Markup per barrel figures are from Table 3. Column 3 contains a dividend per barrel figure for 1971 which has been adjusted to remove the $838,545 profit on a tanker sub-charter which was apparently remitted in the form of dividends to Murphy Oil (Calgary).

(d) The CIF contract prices for January to May 1970 are based on FOB price ($1.27) and transportation cost ($0.574) information, reported in *Spur Oil Ltd. v. The Queen*, Federal Court, Trial Division, 81 DTC 5168, at Tab 178 of Book II of Exhibits, which were extended to October and adjusted in November for the $0.065 increase in Host Government Take for Zakum as per the BP contract price adjustment clause, plus 1 per cent of the C&F price for insurance. For 1971 to April 1973, the BP Contract C&F prices found in Exhibit I-375A were similarly adjusted for increases in the Zakum Host Government Take and port dues and 1 per cent of the C & F price was added for insurance. Since the dates for the Canadian purchase prices reported are delivery dates, the comparisons are actually made with the BP Contract prices in effect in the previous month (i.e., the month of loading at Kharg Island in the Persian Gulf). *Asterisks* are used to denote those monthly BP Contract prices for which this procedure applies in 1971 and 1972.

(e) If the BP Contract prices for June to August 3, 1971 were calculated using the Worldscale 100 freight rate (i.e. $1.249) charged to Murphy for these initial cargoes, then negative markup figures would also be observed with the higher price of $2.924.

PCB.[50] These closely matched the prices found in the Murphy Oil Group's contracts with Marc Rich & Co. A.G. (of Switzerland).[51] Under the terms of these contracts, Murphy Oil provided Iranian Light to Marc Rich on an FOB Kharg Island basis while Marc Rich supplied Spur Oil Ltd. (formerly Murphy Oil Quebec) on a Portland CIF basis. The Marc Rich contracts therefore also provided some third-party freight data. The freight rates quoted in the contracts were $0.925[52] for 1976 and Worldscale 52.5 or $1.196[53] for 1977 for shipments between Kharg Island and Portland. These rates were used in combination with FOB prices (i.e., the OGSP, and U.S. DOE third-party maximum prices) found on Table F-3 to generate CIF prices for Table F-4 in 1976/1977.[54]

(c) The Irving Oil Group

A 1970 "negotiated market" price and offshore prices calculated for 1971 to 1975 for the Irving Oil Group of companies could be treated as if they were of a third-party nature even though Irving's ultimate crude oil and transportation service supplier (since 1960) was Standard Oil Company of California (SOCAL) which initially, through its subsidiary Standard Oil of British Columbia, held a 51 per cent interest in Irving Refining Limited and a 49 per cent interest in Irving Oil Company, Limited (the marketing and distribution corporation for the Irving Group). By amalgamation in June 1973, Irving Oil Limited became the holding corporation of the Irving Group, with SOCAL's total ownership interest being reduced to 48.9 per cent in 1976. The Irving family interests were held through private companies. Irving California Oil Company Limited (IRVCAL) of Bermuda was a "shelf" company[55] under the name of Bomag International Ltd. when it was purchased in 1971. It was initially equally owned by Irving Refining Limited and Irving Oil Company, Limited. As a result of the 1973 amalgamation, IRVCAL became a wholly owned subsidiary of Irving Oil Limited.[56] It was set up as an offshore trader to share non-Canadian crude oil production and transportation profits, related to supplying the Irving refinery, between SOCAL and Irving.[57]

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[50] See Exhibits I-114 Confidential and I-126.

[51] See Exhibit I-375A, item 6.

[52] This freight rate was derived by subtracting the FOB price of $11.62 and the implicit 1 per cent insurance element of the CIF price from the $12.67 CIF price quoted in the contract.

[53] The $1.20 freight rate cited was for 33.3° API. For 34° API, this would be $1.196.

[54] On Table F-2 for Arabian Light and Table F-11 for Iranian Heavy and Kuwait 31° API, these Murphy freight rates were also used in combination with similar third-party FOB data to generate CIF prices.

[55] See Transcript Vol. 83, p. 15813.

[56] See Exhibit I-14, pp. 2 to 3. SOCAL's interests were held through Standard Oil Company of British Columbia (Chevron Canada Limited as of 1975).

From 1960 to July 1971, Irving Refining Limited was supplied on a CIF Saint John, New Brunswick basis under the terms of a twenty-year agreement signed in 1957 between it and California Transport Corporation (a SOCAL company) in which the CIF price of $2.712 was to vary with any changes in the July 1, 1956 posted prices of Arabian Light ($1.93) and Iranian Light ($1.91).[58] By the end of 1960,[59] the CIF contract prices for these crude oils had fallen to $2.58. They remained at that level, except for Iranian Light which rose to $2.59 in 1965, until July 1971, inclusive. On August 9, 1971, Irving Refining Limited signed a total requirements supply agreement[60] with recently acquired Bomag International Limited for Arabian Light and Iranian Light at a CIF price of $2.90 subject to increases in (a) Host Government Take and (b) the August 1, 1971 AFRA LR-2 freight rate of $1.05 for shipments between the Persian Gulf and Irving's deep water Mispec Terminal facilities.[61] (The contractual relationships between the Irving importing companies and the offshore trader were continued in several contracts in 1972, 1980 and 1981).[62]

In 1971, at the same time as it agreed to supply Irving, Bomag signed a parallel supply agreement with Chevron Oil Sales Company (a Delaware Corporation affiliated with SOCAL) in which the CIF Saint John price was set at $2.104[63] subject to Host Government Take increases, as well as increases in various factors associated with freight costs. Therefore a markup of 79.6¢[64] was imposed on the CIF price of Irving's imports on August 9,

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[57] See Transcript Vol. 83, p. 15816.

[58] See Exhibit I-318A. The term of the agreement was to be from August 14, 1957 to 20 years after the opening of the refinery. The agreement only allowed a price formula review at the end of 10 years of operation (i.e., 1970), but could be terminated on one year's notice. Chevron Transportation Corporation subsequently acquired California Transportation's rights under this agreement.

[59] The Saint John refinery opened in 1960.

[60] The previous supply agreement also contained a total requirements clause.

[61] See Exhibit I-257 at Tab 2.

[62] See Exhibit I-374 Confidential for the 1972, 1980 and 1981 contracts.

[63] See Exhibit I-374 Confidential at Tab 1 which is a December 26, 1972 agreement between the same parties (except that Bomag has become IRVCAL) in which the August 9, 1971 price of $2.104 was reported as covering the first 120,000 barrels per calendar day requirements of the refinery until 100 million barrels were sold and then $2.243 thereafter, with prices of $2.393 and $2.493 for extra sales of 20,000 and 80,000 barrels per day. Since the maximum volume ever imported was 55 million barrels, only the $2.104 price was relevant (see Exhibit I-259). See also Exhibit I-14, p. 4.

[64] That is, $2.90 minus $2.104.

1971 by means of an offshore trading company. In an Irving Oil financial document dated April 1973, an offshore price of $2.667 is compared to a reported price of $3.272 for Arabian and Iranian Light.[65] This represents a markup of 60.5¢.

Evidence of an earlier "negotiated market" price was found in a September 1, 1970 draft of an unsigned agreement between Irving Refining Limited and Chevron Oil Sales Company which contained a CIF price of $2.025 for Arabian Light and Iranian Light crude oils, with similar FOB price and freight cost adjustment clauses, in comparison to the $2.58/$2.59 CIF prices being paid.[66]

In order to calculate net offshore transaction prices for 1971 onwards, net income per barrel and dividend per barrel figures were derived from financial data available for Bomag-IRVCAL. Table E-5 is limited to 1971 to 1975 data. The Commission does not have any information for 1976 to 1981. Net offshore prices would also have to be calculated for 1976 to 1981 because Irving Oil reported that IRVCAL had always made an overall profit on its sales to Irving Oil.[67] (No dividends were reported to have been received in 1982.[68]) The net income rather than dividend per barrel figures were used because they represented the actual markup charged per year whereas an examination of the dividends declared over the 1971 to 1975 period shows lags in distribution. There were with no dividends in 1971 and low (high) dividends in 1973 (1974/1975) relative to the net income earned in those years.

Table E-6 provides an example of the calculation of net offshore CIF and FOB prices for Arabian Light for 1971 to 1975 using net income per barrel figures to reduce the Saint John CIF and FOB purchase or import prices paid by Irving Refining Limited. Similar CIF and FOB prices are found on Tables F-3 and F-4 for Iranian Light (1971 to 1974) and on Tables F-10 and F-11 for Iranian Heavy (1973 to 1974). It was not possible to calculate net offshore prices for (a) 1976 to 1981 for Arabian Light, (b) 1976 to 1978 for Iranian Light and (c) 1980 and 1981 for Arabian Medium 31° API. The FOB and Saint John CIF purchase or import prices used in the above calculations were taken from Exhibit I-394 Confidential (for the annual 1971

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[65] See Exhibit I-272 Confidential.

[66] See Exhibit I-257 at Tab 1. The $2.90 August 9, 1971 price added Arabian and Iranian Light Host Government Take increases in November 1970 and 1971 to the 1970 CIF prices of $2.58/$2.59.

[67] Mr. Arthur Irving confirmed that IRVCAL's only source of income was the markup it put on its sales to Irving Oil. See Transcript Vol. 83A, pp. 42-43.

[68] See Exhibits I-318A, 318B and 318C, all Confidential and Transcript Vol. 83, p. 15826.

TABLE E-5

Financial Data for Irving California Oil Company Limited (IRVCAL), 1971-1975

	(U.S. dollars)			(U.S. Cents Per Barrel)	
Year	Net Income[b]	Dividends[b]	Number of Barrels Imported Into Canada[c]	Net Income Per Barrel[a]	Dividends Per Barrel
1971	10,829,245	Nil	27,657,991	39.2* (79.6)	Nil
1972	21,550,218	25,600,000	33,819,804	63.7	75.7
1973	42,549,629	11,800,000	39,850,191	107.0**(60.5)	29.6
1974	48,735,987	63,300,000	36,722,252	132.7	172.4
1975	18,361,558	36,400,000	38,654,567	47.5	94.2

Notes and Sources:

(a) The Net Income Per Barrel figure with a *single asterisk* represents the average annual markup calculated by dividing net income by the total number of barrels imported. However, IRVCAL (previously called Bomag) only began selling to Irving Refining Limited on August 9, 1971 — with a markup of 79.6¢. Therefore the net income per barrel markup of 39.2¢ is useful only in calculating the net cost to Irving for the year 1971. The Net Income Per Barrel figure with a *double asterisk* is the average annual markup across all crude oils in 1973. In Exhibit I-272 Confidential, an offshore markup of 60.5¢ for Arabian and Iranian Light crude oils is indicated for April 1973.

(b) The net income and dividend figures are from Exhibit I-14, Schedule A.

(c) The number of barrels imported are from Exhibit I-259.

TABLE E-6

Estimation of 100 Per Cent Net Offshore Prices for Arabian Light Crude Oil Paid by Irving Oil, 1971 to 1975
(U.S. $ Per Barrel)

DATE	CANADIAN PURCHASE PRICE[a]		IRVCAL'S NET INCOME PER BARREL[b]	NET OFFSHORE PRICE[c]	
	CIF	FOB		CIF (1)–(3)	FOB (2)–(3)
1971	2.80	1.69	0.392	2.41	1.30
January	2.58	1.80	n.a.	n.a.	n.a.
August 19	2.90	1.85	0.796	2.104	1.054
1972	2.89	1.95	0.637	2.25	1.31
1973	3.57	2.33	1.07	2.50	1.26
April	3.272	n.a.	0.605	2.667	n.a.
1974	11.91	10.01	1.327	10.58	8.68
January	11.63	9.64		10.30	8.31
February	11.74	9.97		10.41	8.64
March	11.80	9.79		10.47	8.46
April	11.90	9.87		10.57	8.54
May	—	—		—	—
June	11.84	9.90		10.51	8.57
July	—	—		—	—
August	11.84	9.97		10.51	8.64
September	11.78	10.05		10.45	8.72
October	11.99	10.39		10.66	9.06
November	12.43	n.a.		11.10	n.a.
December	12.51	10.74		11.18	9.41
COLUMN	(1)	(2)	(3)	(4)	(5)

DATE	CANADIAN PURCHASE PRICE[a]		IRVCAL'S NET INCOME PER BARREL[b]	NET OFFSHORE PRICE[c]	
	CIF	FOB		CIF (1)–(3)	FOB (2)–(3)
1975			0.475		
January	11.92	n.a.		11.45	n.a.
February	11.85	10.83		11.38	10.36
March	11.84	n.a.		11.37	n.a.
April	—	—		—	—
May	11.17	n.a.		10.70	n.a.
June	11.86	n.a.		11.39	n.a.
July	—	—		—	—
August	11.84	10.62		11.37	10.15
September	11.85	10.63		11.38	10.16
October	12.90	11.70		12.43	11.23
November	12.79	11.59		12.32	11.12
December	—	—		—	—
COLUMN	(1)	(2)	(3)	(4)	(5)

Notes and Sources:

(a) For the Canadian purchase prices see Exhibit I-257 at Tab 2 for August 19, 1971, Exhibit I-272 Confidential for April 1973, Exhibit I-394 Confidential for the annual 1971 to 1974 figures and Exhibits I-265 and I-266 for the monthly 1974 and 1975 figures.

(b) The IRVCAL net income per barrel figures are from Table 5.

(c) Tables F-1 and F-2 also show 50 per cent offshore prices which were calculated because the profits of the offshore subsidiary were reported to have been intended to be shared equally between SOCAL and Irving. See Transcript Volume 83, p. 15813.

to 1974 FOB and CIF prices), Exhibit I-257, Tab 2 (for the August 9, 1971 CIF price), Exhibit I-274 Confidential (for the April 1973 CIF price) and Exhibits I-265, 266, 267 Confidential and 268 Confidential (for 1974 to 1981 monthly data).[69] The Commission has no information regarding Irving's 1982 CIF or FOB prices of imported crude oil.

Supply contracts with non-SOCAL corporations[70] were not in evidence so it could not be determined whether the markup represented by the net income per barrel was the same for all crude oils, independent of source. The evidence of differences in the annual and April markups for Arabian Light and Iranian Light in 1973 suggests that markups may also have varied per month for crude oil.

Only the CIF "negotiated market" price for 1970 and the CIF offshore prices of Arabian Light and Iranian Light for 1971 were similar to those observed for third-party transactions. The FOB offshore prices calculated for 1972 to 1975 appear to have been biased downward by a markup on ocean shipping freight rates because they were often below tax paid cost levels. For 1972 to 1974, both FOB and CIF offshore prices calculated for Irving were found to be substantially below prices reported by other Canadian companies, either on a transfer price or third-party price basis. In 1975, the Irving offshore prices were also lower than other companies' prices, but not to such an extent as that observed in prior years. For these reasons, the Irving "negotiated market" or offshore CIF price data can only be relied on for 1970 to 1971. The prices reported for 1960 to 1969 were negotiated in 1957 when posted prices represented transaction prices. Between 1960 and 1969, however, posted prices lost their relevance as market price standards.

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[69] Irving Oil filed its own FOB, freight and CIF records for 1974 to 1981 (see Exhibits I-265 and I-268 Confidential). For various months, some FOB or freight data were not available. Other data were available from the above sources on crude oils not mentioned in Tables F-1 to F-12. These included Arabian Heavy (1975 to 1980), Boscan (1971 to 1975 and 1980 to 1981), Maya and Isthmus (1980 to 1981) and Arabian Extra Light (1973 and 1981). In 1974, the annual net offshore figures for Iranian Light were about $1.50 less than the minimum monthly (FOB or CIF) net offshore price calculated. This was not found to be the case with other crude oils. This anomaly was likely the result of the 1974 annual subsidized crude oil costs being reported as the imported cost in the Irving exhibit.

[70] The list of exhibits in Irving's tax reassessment litigation (see Exhibit I-14) indicated contracts with (a) Asiatic Petroleum (Shell), September 21, 1972 and January 3, 1973, (b) Sun Oil International Inc., March 9, 1972, and (c) Esso International Inc., September 14, 1972.

(d) The Ultramar Group

Third-party price data were available from the Ultramar Group for the following crude oil types found in Tables F-1 to F-12:[71]

(a) Tia Juana Medium 26° API for 1961 to 1974,

(b) Arabian Light for 1974 to 1975, 1977, 1979 and 1980,

(c) Iranian Light for 1975, 1977 and 1978,

(d) Lagomedio for 1966 to 1968 and 1972,

(e) Nigerian Light for 1974,

(f) Iranian Heavy for 1975 to 1979,

(g) Kuwait 31° API for 1976, and,

(h) Venezuelan light crude oils, such as: Mesa 33° API for 1966, 1967, 1970 and 1971; Lagotreco for 1967 and 1970; MarLago for 1967 and 1968; Lago Cinco 33° API for 1969 to 1973; Tia Juana Light for 1970; Centro Lago for 1972; and Mercedes 31° API for 1972.[72]

For 1961 to 1966, it was reported in Exhibit I-263 that Golden Eagle Canada had a twenty-year term contract for 5,000 b/d of T.J. Medium with its parent Ultramar Company Ltd. (England) at the posted price minus 40 cents.[73] Since the posted price was $2.27 ex La Salina (or $2.30 ex Amuay), then this formula's prices of $1.87 ex La Salina or $1.90 ex Amuay match closely the prices supplied by Imperial Oil for third-party Esso International sales to Ultramar in Exhibits I-50 and I-50A. The 3¢ variation from the lowest price of $1.93 was likely due to confusion with the loading ports used by Ultramar.

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[71] See Exhibits I-335, I-126 and I-114 Confidential. Data were also available for crude oil types not mentioned on Tables F-1 to F-12. See Exhibits I-329 and I-337 Confidential for 1960 to 1982 summary lists of crude oil imported.

[72] The API levels of most crude oils were not identified in Exhibit I-335.

[73] This was a March 7, 1963 Irving Oil memo summarizing a conversation with Arnold Lorbeer of Ultramar concerning the Holyrood, Newfoundland refinery's financing and crude oil sources. The refinery was largely financed through a mortgage given by Esso International and backed by a crude oil purchase agreement. There was also a twenty-year commitment by the Newfoundland Government to purchase its petroleum products from this refinery. The financing was channelled through the Canadian and Caribbean Oil Company which was created for this purpose and which was granted a 50 per cent equity interest in the refinery. Later, Ultramar repurchased the 50 per cent equity interest and refinanced the mortgage loan on the refinery. See page 117 of *A Golden Adventure: The First 50 Years of Ultramar* (London: Hurtwood Press 1985). In Exhibit I-78A Confidential, at Tab C-4/C-5 there is a reference to the Esso International contract with Ultramar as starting in June 1962. This suggests that Canadian and Caribbean Oil Company was also used to supply the Esso International crude oil in 1961 and early 1962. The volume of crude oil under the original contract increased to 17,000 b/d in 1968, 15,000 b/d in 1969, 25,000 b/d in 1970, but dropped to 14,000 b/d in 1971 (see I-78A). However, in 1971, a second contract was signed for shipments of 30,000 to 50,000 b/d to the new Quebec refinery as well as for some shipments to Newfoundland to match the volumes of Venezuelan proprietary crude oil which Ultramar used at the Quebec refinery (see M-675 and I-330).

From 1960 to 1966, Ultramar imported some third-party T.J. Medium 26° API crude oil,[74] but mainly relied on its own proprietary crude oils (Oritupano 24° and Mercedes 31°),[75] as well as several other Venezuelan types. Canadian and Caribbean Oil Company Limited, which briefly in 1961 held a 50 per cent equity interest in Golden Eagle Refining Company of Canada, as well as being a mortgage holder, was reported[76] to have been one source of third-party crude oil shipped to Ultramar's Holyrood, Newfoundland refinery in the early 1960s. From 1963 to 1974, Ultramar Liberia Ltd. supplied the crude oil shipped to Canada on an FOB basis while Golden Eagle Liberia Ltd. provided transportation services.[77] In 1975, Ultramar Panama Inc. became the offshore trader.[78] All these offshore companies were owned by the multinational parent (Ultramar Company Ltd.),[79] except for 1966 to 1974 when Ultramar Liberia Ltd. was a wholly owned subsidiary of Golden Eagle Canada Limited (Ultramar Canada Inc. as of 1979)[80] to which it remitted dividends based on its FOB price markups. Esso International was the Ultramar Group's primary source of third-party crude oil on a term basis until the late 1970s, at which time purchases were made from the producer government petroleum corporations.[81]

For 1961 to 1965, as mentioned above, only price data for T.J. Medium imports were available. For 1966 to November 1974, however, Canadian purchase or import prices and offshore prices were found in Exhibit I-335.

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[74] Although the T.J. Medium was being sent to the Refineria de Panama in which Ultramar had a one-third interest, the volumes imported in 1962 and 1967 were a significant proportion of imports to Canada.

[75] See Exhibit I-329 and Transcript Vol. 98, p. 18419.

[76] See Exhibit I-263, the 1961 and 1962 Annual Reports of Ultramar Company Ltd., and Transcript Vol. 98, p. 18414.

[77] See Transcript Vol. 98, p. 18439. The tankers used were either owned or spot chartered. For Holyrood, spot chartering was initially used because the low volumes imported didn't justify term chartering until 1967. See *A Golden Adventure*, p. 227.

[78] See Transcript Vol. 98, pp. 12519 to 12521.

[79] Ultramar Company Ltd. was an investment company. American Ultramar Limited acted as the management corporation for the Group (see Transcript Vol. 98, p. 18462 and Vol. 99, p. 18600).

[80] See Transcript Vol. 98 at pp. 18415, 18429 and 18520. Ultramar Liberia was sold in 1980 to an affiliated company.

[81] See Transcript Vol. 98, pp. 18416 to 18417 and 18425.

The PCB records for Ultramar, filed by the Director,[82] provide 1974 to May 1982 data. It was, therefore, not necessary to calculate the offshore subsidiary's prices. Table E-7 provides an example of the two sets of FOB ex La Salina[83] prices for T.J. Medium from 1967 to 1974 for Holyrood and St-Romuald. However, FOB contract prices between Esso International and Ultramar Panama (M-675) and between Ultramar Panama and Ultramar Liberia, the offshore subsidiary (I-330), show that an additional markup existed in the prices which the offshore subsidiary paid to Ultramar Panama. In 1971, the only year for which data were available, the markups were 20¢ and 9¢ for shipments to the Quebec and Newfoundland refineries under the second contract signed for the new Quebec refinery (see Table F-7). As noted above, some shipments to the Newfoundland refinery were covered under this second contract. Sales to Newfoundland under the original contract would not bear this additional markup. It is not known whether the additional markups under the second contract remained at the same levels for 1972 to 1974. Accordingly, the offshore prices shown for 1972 to 1974 on Table F-7 may be overstated. It may be noted that a markup on transportation services was also reported to have been charged by Golden Eagle Liberia. However, its level was unknown because Ultramar Canada Inc. could not obtain access to that affiliate's corporate records. Freight data for Venezuela to Portland were only found for 1968 to 1970 in the Annual Reports of Golden Eagle Canada Ltd.[84]

The level of the offshore subsidiary markup on FOB prices was relatively low before 1967 (e.g., 10¢ in 1966 for Lagomedio and 0¢ for Mesa). By 1967, the markup was 30¢ for T.J. Medium and all other imported crude oils. It was[85] at that level until June 1971 when it rose slightly to 30.4¢, but was reduced to 19.4¢ for T.J. Medium going to the new St-Romuald, Quebec refinery which opened in October 1971.[86] In 1972, the markup for both refineries was at 19.4¢ to July and 14¢ for the rest of the year. For 1973, the

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[82] See Exhibit I-114 Confidential and I-126.

[83] For Table F-7, the FOB La Salina prices were converted to ex Amuay by the addition of 3¢.

[84] These marked-up freight rates for Venezuela to Portland were 26¢, 29¢ and 28¢. See Exhibit M-537 for the financial statements of this corporation. Ultramar's freight rates would have been higher than refiners using Portland or Halifax/Dartmouth because the relatively low volumes of crude oil refined at Holyrood, coupled with the shallower water at its docking facilities, precluded the use of larger tankers employed by other Canadian refiners.

[85] In August 1969 it increased briefly to 32¢.

[86] The higher FOB price to Newfoundland reflected higher relative freight costs because of the more limited draft of the tankers that could dock at Holyrood. As noted above, additional markups of 20¢ and 9¢ were paid by the offshore subsidiary to Ultramar Panama which purchased the crude oil from Esso International.

TABLE E-7

Net Offshore FOB Prices[a] for Tia Juana Medium (24.0 to 26.9° API) Crude Oil Imported by the Ultramar Group, 1967 to 1974 (U.S. $ Per Barrel, ex La Salina)

	NEWFOUNDLAND REFINERY IMPORTS				QUEBEC REFINERY IMPORTS			
Date	API	Canadian Purchase Price[b]	Net Offshore Price[c]	Markup/ Margin[d]	API	Canadian Purchase Price[b]	Net Offshore Price[c]	Markup/ Margin[d]
1967								
June	25.5	1.85	1.55	0.30		—	—	—
August	"	"	"	"				
September	"	"	"	"				
October	"	"	"	"				
November	"	"	"	"				
December	"	"	"	"				
1968								
February	26.0	1.86	1.56	0.30		—	—	—
April	26.0,27.0	1.86,1.88	1.56,1.58	"				
May	26.0	1.86	1.56	"				
June	"	"	"					
July	"	"	"	"				
August	"	"	"	"				
September	"	"	"	"				
October	"	"	"	"				
November	"	"	"	"				
December	"	"	"	"				
1969								
January	26.0	1.86	1.56	0.30		—	—	—
February	"	"	"	"				
March	"	"	"	"				
April	"	"	"	"				
May	"	"	"	"				
June	"	"	"	"				
July	"	"	"	"				

TABLE E-7 (cont'd)

Date	NEWFOUNDLAND REFINERY IMPORTS				QUEBEC REFINERY IMPORTS			
	API	Canadian Purchase Price[b]	Net Offshore Price[c]	Markup/ Margin[d]	API	Canadian Purchase Price[b]	Net Offshore Price[c]	Markup/ Margin[d]
August	26.0,25.0	1.86	1.56,1.54	0.32,0.30				
September	26.0	1.86	1.56	0.30				
October	"	"	"	"				
November	"	"	"	"				
December	"	"	"	"				
1970								
January	26.0	1.86	1.56	0.30		—	—	—
February	"	"	"	"				
March	"	"	"	"				
April	27.0	1.88	1.58	"				
May	27.0,26.0	1.88,1.86	1.58,1.56	"				
June	26.0	1.86	1.56	"				
July	"	"	"	"				
August	"	"	"	"				
September	24.0	1.82	1.52	"				
October	26.0	1.86	1.56	"				
November	"	"	"	"				
December	"	"	"	"				
1971								
January	26.0	1.97	1.67	0.30				
February	26.0	1.97	1.67	"				
March	26.0	1.97,2.331	1.67,2.031	"				
April	26.0	2.331	2.031	"				
May	26.0	2.331	2.031	"				
June	26.0,27.0	2.331,2.339	2.031,2.039	"	24.0	2.52	2.326	0.194
July	26.0	2.535	2.231	0.304		"	"	"
August	27.0,24.0	2.5425,2.52	2.2385,2.216	"		"	"	"
September	26.0	2.535	2.231	"		"	"	"
October	26.0,27.0	2.535,2.5425	2.231,2.2385	"	25.0	2.5275	2.3335	"
November	26.0	2.535	2.231	"		"	"	"
December	26.0	"	"	"		"	"	"

Date	NEWFOUNDLAND REFINERY IMPORTS				QUEBEC REFINERY IMPORTS			
	API	Canadian Purchase Price[b]	Net Offshore Price[c]	Markup/ Margin[d]	API	Canadian Purchase Price[b]	Net Offshore Price[c]	Markup/ Margin[d]
1972								
January		—	—	—		—	—	—
February	25.6	2.703	2.509	0.194	25.6	2.703	2.509	0.194
March	"	2.703	2.509	0.194	"	2.703	2.509	0.194
April	n.a.	2.686	2.492	0.194	n.a.	2.686	2.492	0.194
May	"	2.686,2.738	2.492,2.544	0.194	"	2.686	2.492	0.194
June	"	2.678	2.484	0.194	"	—	—	—
July	"	2.674	2.480	0.194	"	2.674	2.480	0.194
August	"	2.512,2.528	2.372,2.388	0.140	"	2.52	2.38	0.140
September	"	2.528,2.512	2.38,2.372	0.148,0.14	"	2.52	2.38	0.140
October	"	2.52	2.38	0.14	"	2.52	2.38	0.140
November	"	2.512	2.372	0.14	"	2.52	2.38	0.140
December	"	2.512,2.52	2.372,2.38	0.14	"	"	"	"
1973								
January	"	2.577	2.487	0.09	"	2.561	2.471	0.09
February	"	2.561,2.603	2.481,2.513	0.09	"	2.603,2.635	2.513,2.545	0.09
March	"	2.727,2.805	2.637,2.715	0.09	"	2.603,2.74	2.513,2.65	0.09
April	"	2.805	2.715	0.09	"	2.727,2.805	2.637,2.715	0.09
May	"	2.805	2.715	0.09	"	2.805	2.715	0.09
June	"	2.805	2.715	0.09	"	2.805	2.715	0.09
July	"	3.094	2.894	0.20	"	3.094	2.894	0.20
August	"	3.329	3.129	0.20	"	3.329	3.129	0.20
September	"	3.546	3.346	0.20	"	2.546,3.466	3.346,3.266	0.20
October	"	3.796	3.596	0.20	"	3.796,3.716	3.596,3.516	0.20
November	"	3.796,5.147, 5.36	3.596,4.947, 5.16	0.20	"	5.147,5.36	4.947,5.16	0.20
December	"	—	—	—	"	—	—	—
1974								
January	n.a.	—	—	—	n.a.	—	—	—
February	"	9.644	9.444	0.20	"	9.544	9.444	0.10
March	"	9.644	9.444	0.20	"	9.544	9.444	0.10
April	"	9.65	9.45	0.20	"	9.55,9.544, 9.7312	9.55,9.444, 9.5312	0.10 0.20
May	"	9.65	9.45	0.20	"	9.544,9.538,9.55 9.964	9.444,9.438,9.45, 9.764	0.10 0.20
June	"	9.656	9.456	0.20	"	9.544,9.55,9.556, 9.7026,9.964	9.444,9.45,9.456, 9.5026,9.764	0.10 0.20
July	"	9.836	9.636	0.20	"	9.836,9.873,9.725, 9.688,9.8396	9.636,9.673,9,525, 9.488,9.6396	0.20 0.20

TABLE E-7 (cont'd)

Date	NEWFOUNDLAND REFINERY IMPORTS				QUEBEC REFINERY IMPORTS			
	API	Canadian Purchase Price[b]	Net Offshore Price[c]	Markup/ Margin[d]	API	Canadian Purchase Price[b]	Net Offshore Price[c]	Markup/ Margin[d]
1974								
August	"	9.193	8.993	0.20	"	—	—	—
September	"	—	—	—	"	9.5253,9.3554, 9.3148	9.2253,9.0554, 9.0148	0.20 0.20
October	"	—	—	—	"	—	—	—
November	"	—	—	—	"	—	—	—

Notes and Sources:

(a) The price data are from Exhibit I-335. For 1974, the price data shown for February to August in Exhibit I-335 were subject to several retroactive adjustments made in the last months of 1974.

(b) The Canadian purchase or import prices represent the prices which Golden Eagle Canada Ltd. (Ultramar Canada Inc. as of 1979) paid to its wholly owned subsidiary, Ultramar Liberia Limited.

(c) The net offshore prices are the prices which Ultramar Liberia paid to its suppliers. Over the 1967 to 1974 period, these included Ultramar Panama and Esso International, but the Tia Juana Medium crude oil was ultimately obtained from Esso International.

(d) Table F-7 also shows the 1971 Esso International contract prices for T.J. Medium 24°, 25° and 26° crude oil (from M-675). These indicate that the offshore prices shown in this table for Quebec refinery imports include a 20¢ markup for June to December 1971. The markup for the Newfoundland refinery was 9¢. It was not possible to determine whether these markups were maintained at these levels to the end of 1974.

markup fell to 9¢ until it rose to 20¢ for July to November. By 1974 it fell to 10¢ for Quebec but rose again to 20¢ in July. (No data were available from August 1974 onwards.)

The level of markup varied considerably by type of crude oil. For some, like Bachaquero Reconstituted or Bachaquero it was 0¢ from 1968 to January 1970, but 20¢ in 1973 and 1974. For Brega it went from 10¢ in August 1971 to October 1972 to 35¢ or 30¢ in late 1972 and to 20¢ and 10¢ thereafter. On Lagomedio, the markup started at 10¢ in 1966 and rose to 30¢ in 1968 before falling to 6.5¢ in 1972. On its own proprietary crude oils,[87] the markup was 30¢ and 20¢ in 1967 and 1971 for Oritupano (0¢ in 1972) and 19.4¢ in September 1972 for Mercedes. Only limited information was available on whether Ultramar Panama imposed a similar markup on crude oil imports from 1975 to 1982. The Ultramar witnesses stated[88] that FOB prices were set at Official Government Selling Prices (OGSP) in its various term contracts with Ultramar Panama. However, comparisons made by the Director's witnesses, Brant/Davidson, found that Ultramar's prices for Arabian Light and Iranian Light in 1974 and 1975 were 20¢ to 30¢ above OGSP.[89] (Ultramar had ceased importing T.J. Medium after 1974.) On the other hand, the Ultramar Group was able to offset some of these extra costs by engaging in back-hauling[90] of heavy fuel oils and iron ore to the U.S. East Coast and Europe, respectively. However, the use of AFRA rates in the contracts of affreightment for Canada[91] showed that these savings were not passed on to the Canadian operating companies by means of lower contracted freight rates. They could not be passed on in the form of tax free dividends because these offshore transportation companies were never owned by the Canadian-based companies.

In summary, the net offshore FOB prices available for 1961 to 1974 for T.J. Medium 26° API and for 1966 to 1971 concerning the other crude oils found in Tables F-1 to F-12 were reliable figures because they were provided directly by Ultramar (except for 1961 to 1965 for which there is evidence that is considered less reliable). For 1972 to 1974 and 1975 to 1981 it was not possible to determine whether any additional markups were being applied on FOB offshore prices or FOB term contract prices and freight rates, respectively because in the former period Esso International contract price data were not available while in the latter period spot market purchases may account for any FOB divergencies with OGSP while Ultramar's unique transportation circumstances made comparisons with third-party freight rates reported for shipments to Portland difficult.

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[87] The Mercedes proprietary crude oil was sold to Texaco Inc. at the end of 1972 while the other Venezuelan crude oil interests were nationalized at the end of 1975. See the 1972 and 1975 Annual Reports of the Ultramar Company Ltd.

[88] See Transcript Vol. 98, p. 18506.

[89] See Exhibits I-79 and I-113 (both Confidential) and Vol. 99, pp. 18608 to 18609.

[90] See Transcript Vol. 98, p. 18493 and Annual Reports of the Ultramar Company Limited (renamed Ultramar PLC in January 1982).

[91] AFRA rates were found from September 1975 onwards in the various contracts of affreightment (see Exhibits I-332 to 334 and I-343 and 344, both Confidential).

2. Other Third-Party Price Data

Transaction prices concerning third-party sales/purchases were also available for the Newfoundland Refining Company Limited, Esso International/Exxon and the Sun Oil Group, as well as from various trade, academic and government publications.

(a) The Newfoundland Refining Company

No actual price information was filed as evidence for the Newfoundland Refining Company which began operating at Come-by-Chance in 1973 and closed down in 1976. Some information about its levels of third-party FOB prices did, however, appear from certain contracts with various crude oil suppliers. For example, a contract with BP Trading Limited,[92] signed April 17, 1970, established "market" prices of $1.275 for Iranian Light 34° API and $1.21 for Kuwait 31° API. These April 1970 prices were subject to increases in Tax Paid Cost[93] and increases of $0.005 every July 1, starting in 1971. On Tables F-3 and F-10, these base prices were so adjusted to produce a series of FOB prices for 1970 to 1972. No attempt was made to calculate 1973 to 1976 prices because no information was available on the formula required to deal with the participation (i.e., partial nationalization) costs which began in 1973. Another contract, with Petromin (the Saudi Arabian Government Corporation), was signed May 9, 1973 for deliveries from June 1973 to the end of 1975. It set the FOB price of Arabian Light at 7 per cent less than the Official Government Selling Price (see Table F-1).[94]

(b) Esso International/Exxon

Imperial Oil provided the Commission with the FOB prices which Esso International/Exxon received on its third-party transactions between 1960 and 1975 for medium (24.0° to 26.0° API) and light (31.0° to 35.0° API) Venezuelan crude oils. At the Commission's request, the transaction price data per individual buyer/company were segregated into integrated and non-integrated buyers.[95] "Integrated" petroleum company buyers were defined as having access to significant foreign crude oil supplies either of their own or through affiliates for at least some period of time between 1960 and 1975.

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[92] See Exhibit I-299 and I-322.

[93] ICOPP, for various years, provided Tax Paid Cost data. See Tables F-3 and F-10.

[94] See Exhibit I-322. For Arabian Extra Light and Arabian Heavy, the discounts were 3.28 and 7.30 per cent, respectively.

The minimum and maximum prices reported per year for non-integrated buyers were used to calculate price ranges on Tables F-5 and F-6 (Lagomedio 32° API), F-7 (T.J. Medium 26° API), and F-12 (Guanipa 30°, T.J. Light 31°, Lagomedio 32° and Oficina 33° and 34° API).

The Esso International/Exxon price range data were more useful for 1960 to 1970 because the numerous price changes observed from 1971 to 1975 made the annual price range data unusable for comparisons with monthly prices reported in other sources. The Venezuelan Medium crude oil price range was based on a large number of transactions. However, the Venezuelan Light crude oil price ranges were based on only a few transactions and therefore were considered to be of limited use.[96]

(c) Sun Oil Group

Two sets of third-party prices were available from the Sun Oil Group. Estimates of FOB market prices, called alternate values, were found in various Sun Canada documents for Lagomedio/ Lagomar 32° API (1961 to 1971) and Arabian Light 34° API (1969 to 1971).[97] They were apparently developed to demonstrate how the transfer prices charged to Sun Canada were in excess of prices which the Sun Group could have expected to obtain in sales to third-party customers in Europe and Latin America.[98] In addition to the 1962 to 1971 alternate values listed in I-188, which are shown on Tables F-1, F-5 and F-12, a third-party price range was available from other references to arm's length or market prices made by Sun Oil Group officials. These also appear on Tables F-1, F-5 and F-12.[99]

Sun Oil also provided the Commission with monthly purchase/sales prices between the Sun Oil Group and third-party sellers/buyers for January to

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[95] See Exhibits I-78A Confidential, I-50, Appendix 3 and I-50A.

[96] In some years, only one transaction was observed; in other years, no Venezuelan light crude oil transactions occurred.

[97] See Exhibits I-16, Appendix 2, I-188, I-194 and I-196.

[98] These calculations were designed to show that Sun Canada's transfer prices actually provided the Sun Oil Group with significant profits on its crude oil sales to Canada and that these profits had to be included in any rate of return analysis of Sun Canada's financial performance.

[99] See Table F-5, note 10 for references cited.

August 1974.[100] These prices were also broken down into integrated and non-integrated petroleum company categories at the request of the Commission.[101] (It was not however possible for the Sun Oil Group to categorize several of the prices.) The prices reported on transactions involving non-integrated petroleum companies are shown on Tables F-3, F-8, F-10 and F-12.

(d) Adelman, Newton and Blair Price Surveys

Third-party transaction price data are also available in price surveys carried out by M. A. Adelman, W. I. Newton and J. M. Blair. In *The World Petroleum Market*,[102] Adelman provided price data for 1958 to May 1967 and for April 1968 to 1970 on African, Middle East and Venezuelan crude oil transactions which involved large third-party buyers. The data were based on press reports and generally originated as CIF prices which Adelman converted to FOB prices by deducting the cost of the freight and credit services provided by the seller. The prices of the various crude oils, listed in *The World Petroleum Market*, were standardized to 31° API and adjusted for sulphur differentials to allow comparisons with Iranian Heavy 31° API crude oil. The prices shown on Tables F-1, F-3, F-8 and F-10 were obtained by reversing the standardization procedures used by Adelman. Adelman's price surveys only provided limited information on Venezuelan crude oil sales.

Newton, in a 1969 report to the U.S. Senate also provided similar third-party FOB price data for the 1960 to 1968 period for Middle East and African crude oils.[103] In the same report Blair provided some additional information on third-party prices, including 1964 to 1966 purchase prices for Venezuelan 35° API crude oil reported by Petrobras of Brazil.[104]

The prices found in these surveys were typically for contracts covering large volumes for at least six months and generally for one year or more. Therefore they provide a good source of term third-party price range data.

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[100] See Exhibit I-347.

[101] See Exhibit I-351 Confidential.

[102] See M.A. Adelman, *The World Petroleum Market* (Baltimore, The John Hopkins University Press: 1972), pp. 384 to 397 and pp. 417 to 421. See also Exhibit I-51A at Tab II-4 for the 1958 to May 1967 survey.

[103] See statements of Walter I. Newton and John M. Blair in United States Senate, Hearings before the Subcommittee on Antitrust and Monopoly of the Committee on the Judiciary, Ninety-First Congress, First Session, *Governmental Intervention in the Market Mechanism: The Petroleum Industry*, April 1969, pp. 41 to 76 (Exhibit I-51A, at Tab II-5).

[104] *Ibid.*, pp. 75 to 76.

(e) United States Department of Energy Import Prices

Data were also available on third-party monthly prices of imports to the United States for October 1973 to 1976 and 1979. Two sets of term prices were calculated from petroleum company reports filed with the U.S. Department of Energy (DOE).[105] The representative (or weighted median) price was defined as the lowest price at which 50 per cent or more (by volume) of arm's length transactions took place. The maximum price was defined as the higher of:

(a) the lowest price, plus 10¢ per barrel, at which 50 per cent or more (by volume) of arm's length transactions took place per month, or

(b) the lowest price at which 65 per cent or more (by volume) of arm's length transactions took place.

The representative prices were used for Arabian Light (Table F-1); Iranian Light (Table F-2); Tia Juana Medium (Table F-7); Nigerian Light 34° API (Table F-8); Iranian Heavy, Kuwait 31° API and Arabian Medium 31° API (Table F-10) and Venezuelan Light 34° API crude oils (Table F-12). Representative prices when not available for October 1973 to 1974 were derived by subtracting 10¢ from the maximum price. These figures, because of the definition of the maximum price, provided an estimate of the maximum value possible for the representative price.

Because these prices were based on term arm's length transactions involving large buyers, they also provide a good source of comparative information on market prices. For Venezuelan crude oils, prices were based on summaries of prices of all crude oil imports in wide API ranges of, for example, 29° to 36° API for 34° API prices. They thus may be less reliable price standards because of the assumptions used to adjust for variations in sulphur content and API levels. Problems of this nature were not found with the Middle East or African crude oil price data. For those months in which OSP and related prices were changed, the above prices may be biased up or downwards depending on the day on which the price change occurred.

(f) Spot and Official Prices

Petroleum Intelligence Weekly (PIW) provided 1960 to 1980 data on spot and official prices for Arabian Light, Nigerian Bonny Light 37° API and Kuwait 31° API.[106] Spot prices were defined as representing prices of single cargoes traded on the open market. Since the spot market was reported, by PIW, to have not fully emerged until the late 1960s, all available open market sales prices to third parties were used for earlier periods. Official prices referred to the prices found on long-term contracts which accounted for the bulk of crude oil flows. With nationalization in 1973 to 1975, governments began setting Official Government Selling Prices (OGSP). For the post 1972 period, PIW provided official prices that were OGSP prices adjusted for any discounts or premiums applicable to all clients. The data were available on an annual basis for 1960 to 1970, a semi-annual basis for 1971 to 1972 and a quarterly basis for 1973 to 1980.

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[105] See Exhibit I-87 for an explanation of the data collected by the DOE. The sources of the price data were the *U.S. Federal Register*, Vol. 40, pp. 27058 to 27060, Vol. 42, pp. 22190 to 22192, Vol. 43, pp. 34186 to 34191, Vol. 44, pp. 30720 to 30725 and Vol. 45, pp. 21342 to 21344 and 82699 to 82702.

For Iranian Light, BP Canada provided the Commission with 1960 to 1968 spot prices.[107] Adelman also provided 1968 to 1970 spot prices for Iranian Light and 1968/1969 spot prices for Iranian Heavy.[108]

Official Government Selling Prices[109] were obtained from various issues of *International Crude Oil and Petroleum Products*. Posted prices were found in various issues of the OPEC *Statistical Bulletin*, Adelman's *The World Petroleum Market* and Jacoby's *Multinational Oil*.[110]

3. Production and/or Acquisition Cost Data

Only limited cost data were available for certain types of crude oil shown on Tables F-1 to F-12. The usefulness of many of the cost measures developed depended on the assumptions on which they were based.

(a) Tax Paid Cost

Tax paid cost refers to the cost of equity crude oil[111] and consisted of the sum of production costs and Host Government Take (i.e., royalties and taxes). Production costs included all costs relevant for the exploration, development and operation of the crude oil fields. While Host Government Take was constant, production cost could vary by company within a country for the same type of crude oil (e.g., for drilling onshore or offshore). Tax paid cost figures[112] provided an estimate of the acquisition cost or average variable cost to the crude oil producing company and thus indicated the lowest level at which it could sell crude oil without incurring a loss. Such measures were useful in verifying the levels of third-party prices. Any calculated net offshore prices below tax paid cost would be questionable. The third-party prices reported on Tables F-1 to F-12 (excluding the exceptions noted above for Petrofina and Irving) allowed the crude oil producing companies a large enough profit margin over tax paid cost to cover their opportunity cost of invested capital. The Director's witnesses, Brant and Davidson, used tax paid cost data to calculate 1964 to 1981 "competitive supply prices" for Arabian Light which included an estimate of the margin required for a 10 per cent and a 15 per cent rate of return on invested capital.[113] The largest margin required to cover capital costs was 8.2¢ (in 1973).[114] Their evidence of the "competitive supply price" indicates that third-party prices were not the result of distress sales, i.e., below short-run average variable costs or historical average total long-run costs.

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[106] See Exhibits I-18 and I-23 or I-51A, Tab II-6 and I-51D, Tab VII-8.

[107] See Exhibit I-290.

[108] See *op.cit.*, *W.P.M.*, pp. 417 to 421.

[109] For Venezuela, the OGSP prices were called Minimum Export Values to 1975, inclusive, and Minimum Sales Prices thereafter.

[110] Neil H. Jacoby, *Multinational Oil* (New York, MacMillan Publishing Co. Inc.; 1974).

[111] That is, crude oil which individual companies owned through possession of crude oil field concessions in Venezuela, the Middle East, and Africa, etc.

(b) Weighted Average Cost

With increased frequency of nationalizations in 1973, it became necessary for petroleum companies to buy increasing proportions of their crude oil supplies from host governments at Official Government Selling Prices. Weighted average cost was developed to provide an estimate of each company's average combined cost of equity crude oil (at tax paid cost) and producer government crude oil (at OGSP). The weighting formula used depended on the percentage of crude oil assets nationalized by each crude oil producing country. The percentage generally went from 25 per cent in 1973 to 60 per cent in 1974 and 100 per cent in 1975/1976. Even after complete nationalization in some countries, other countries still allowed some companies to keep certain levels of equity crude oil (e.g., Nigeria and Libya). Therefore, weighted average cost would still be relevant in those countries after 1976. Weighted average cost data were only calculated for Arabian Light (Table F-1).

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[112] The data shown on Tables F-1 to F-12 were found in *ICOPP*, Exhibit I-16 and OPEC *Statistical Bulletins*.

[113] See Exhibit I-79 Confidential or I-80.

[114] Table F-1 only showed 1960 to 1972 figures on "competitive supply prices" because the semi-annual figures were not as useful when making comparisons with monthly prices after 1970.

(c) U.S. Department of Energy Acquisition Costs

The acquisition cost data were found in Exhibit I-80.[115] According to witnesses Brant and Davidson, the data were taken from term arm's length cost figures reported monthly to the U.S. Department of Energy (DOE) between 1974 and 1981. Where more than one cost figure per crude oil was available per month the witnesses chose the highest figure. If more than one figure was reported per month by any company, only the latest or revised figure reported by that company was considered.[116] The costs could be tax paid cost or weighted average cost depending upon the ownership nature of the crude oil types imported into the U.S. An examination of the DOE source documents showed that increases in Host Government Take or participation costs (i.e., resulting from changes in the level of partial nationalization) in 1974 were responded to differently by various companies. For example, while Texaco Inc.'s costs were adjusted on the date of any change, Exxon only adjusted costs after a lag of several months because of the substantial inventory it maintained in its Caribbean transshipment terminals and on board its fleet of tankers.

(d) International Crude Oil and Petroleum Product (ICOPP) Acquisition Costs

ICOPP's estimates of market prices were derived by adjusting reported OGSP prices for any discounts or premiums applicable to all buyers.[117] For example, any service charges or fees which the host governments paid to the companies were treated as discounts if they were unrelated to actual services rendered. Where equity crude oil interests were still available, weighted average costs rather than OGSP prices were chosen as the relevant acquisition cost figure.

4. Third-Party Transportation Cost Data

Only very limited evidence was available on actual third-party costs for ocean term charter and spot freight rates and insurance costs involved in shipping crude oil from the producing countries to Canadian ports such as, Halifax, Montreal, Saint John, St-Romuald, Holyrood, Point Tupper and Come-by-Chance or to the Portland, Maine terminus of the pipeline to Montreal.[118] However, it was possible to derive estimates of third-party term charter and spot transportation costs for 1958 to 1976/1977 because of information provided by Imperial Oil and material found in other sources.

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[115] See Exhibit I-85 for the raw data sheets which Brant obtained from the U.S. DOE. The collection system utilized by the DOE was explained in Exhibit I-87.

[116] See Transcript Volume 71, p. 13348.

[117] See Exhibit I-79 Confidential and I-80.

[118] The pipeline tariffs for 1956 to 1981 can be found in Exhibit I-161.

(a) Ocean Freight Rates Reported for Third-Party Shipments to Eastern Canada

For 1965 to November 1967 and December 1967 to 1970, implicit term charter transportation costs in the CIF contract between Murphy and the BP Group were $0.671 and $0.681, respectively. These were for shipments from the Persian Gulf.[119] In 1965/1966 and 1967/1968, BP also agreed to ship the Murphy Group's proprietary crude oils from either Venezuela or the Persian Gulf at Intascale less 45 per cent. (These were equivalent to transportation costs of $0.663 in 1965/1966 and $0.828 in the second half of 1967 and $0.732 in 1968.) For July 1968 to April 1973, and 1976 to 1977 other term charter freight rate data were also available from the Murphy Oil Group.[120] Spot freight rate data were also available from the Murphy Oil Group for 1969 and 1970.[121]

For voyages between Venezuela and Portland, the actual freight rate data in evidence were even more limited. In 1967, a Petrofina internal memo reported its actual freight costs as being Intascale less 42 per cent or 19¢ for shipments of Lagomedio whereas its reported freight costs for that year were 31¢.[122] Murphy Oil reported third-party rates for February 1970 of $0.222 and $0.225 for Lagomedio (32.3° API) and Lot 17 (34.8° API) Venezuelan crude oil. These rates at Worldscale 81 were effective from February 1970 to February 1971 between Punta de Palmas and Portland. For 1968 to 1970, Ultramar reported rates of 26¢, 29¢ and 28¢ for crude oil of 26° API.[123] However, these were not third-party rates because they included a markup imposed by Golden Eagle Liberia Ltd.

As noted above, freight rates were often cited in terms of discounts (or premiums) off Intascale flat or Worldscale 100 rate levels (e.g., Intascale less 45 per cent or Worldscale 65).[124] Worldscale, the current standard freight scale, represents the Worldwide Tanker Nominal Freight Scale for round trip voyages between ports by various categories of ship size. Worldscale is revised and published semi-annually. In 1970, it replaced Intascale (International Tanker Nominal Freight Scale).

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[119] These were derived by subtracting the FOB prices of $1.35 and $1.33, as well as the pipeline fees found in I-161 from the CIF Montreal contract prices.

[120] See Section 1(b) above for sources. The rates were $0.574 for 1968 to 1970, $0.812 for 1971 to September 1972, $0.828 for October 1972 to April 1973, $0.925 for 1976 and $1.196 for 1977.

[121] The spot freight rates were $1.279 for February 1969 and $0.99 for September 1969 and $1.249 for 1970.

[122] Exhibit M-529, Tab 1, p. 201998.

[123] For 32° API crude oil, the rates would be $0.251, $0.279 and $0.270. These figures were used to calculate the CIF prices shown in Table F-6.

[124] Exhibit I-49, pp. IV-5 to IV-6.

(b) Estimates of Ocean Freight Rates Used to Derive Delivered Third-Party Crude Oil Costs

Imperial Oil provided evidence on annual five-year term charter and annual spot rates for shipments to Portland, Maine for 1960 to 1974.[125] These were taken from H. Clarkson and Company Limited and Adelman.[126] Imperial Oil selected Adelman's freight estimates for 1960 to the first half of 1967, an adjusted version of the Clarkson rates for the second half of 1967 to 1969 and the Clarkson rates for 1970 to 1974 as being representative of annual term charter market freight rates.[127] (For shipments from Venezuela, the higher rates reported from 1963 to 1969 by Clarkson were also used by the Commission because they took into account the smaller tankers more frequently used from Venezuelan ports). For spot rates, the 1960 to 1975 rates cited by Clarkson were used.[128] Since these rates were cited in terms of Intascale or Worldscale, it was necessary to derive cents per barrel figures by applying the Intascale/Worldscale rate levels to the flat rates or Worldscale 100 rate levels also provided by Imperial Oil.[129] Freight rate figures were calculated for 34° API crude oil in Tables F-2 and F-4, 32° API crude oil in Table F-6 and 31° API crude oil in Table F-11. The term charter ocean freight rates used to calculate the estimates of third-party delivered costs shown in these Appendix F tables are given in Table E-8 (for shipments from the Persian Gulf) and Table E-9 (for shipments from La Salina, Venezuela). The spot ocean freight rates used to calculate estimates of third-party spot delivered costs shown on Tables F-2, F-4 and F-11 are given in Table E-10 (for shipments from the Persian Gulf).[130]

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[125] See Exhibits I-49, pp. IV-15 to IV-26 and IX-16 to IX-20, I-50, Appendix 2, pp. I-11 to I-25 and Appendix 4, pp. 1 to 18.

[126] See *op. cit.*, *W.P.M.*, pp. 109, 110 and 112.

[127] See I-49, p. IX-17 and I-50, Appendix 4, p. 8.

[128] See I-49, p. IX-19 and I-50, Appendix 4, p. 9.

[129] See I-50, Appendix 4, pp. 6, 13 and 19 for shipments between Ras Tanura, Saudi Arabia and Portland, pp. 12 and 18 and Appendix 2, p. 21 for shipments to Portland from Puerto La Cruz and La Salina, Venezuela, respectively. The freight rates based on Ras Tanura Intascale or Worldscale flat rates tend to slightly underestimate actual rates from Iran and Kuwait up to 1974. For 1976 to 1977, separate freight rates from Kharg Island were derived from the Murphy Oil contracts.

[130] Spot freight costs were not calculated for shipments from Venezuela because spot FOB price data were not available.

TABLE E-8

Estimates(a) of Term Charter Ocean Freight Rates from the Persian Gulf to Portland 1958 to 1977 (in U.S. dollars per barrel)

Date	34° API	31° API
1958	0.880*(N)	0.896*(N)
1959	0.880 (N)	0.896 (N)
1960	0.663	0.675
1961	0.663	0.675
1962	0.639	0.650
1963	0.639 – 0.680 (N)	0.650 – 0.692 (N)
1964	0.555	0.564
1965	0.555 – 0.671 (M)	0.564 – 0.683 (M)
1966	0.543 – 0.671 (M)	0.552 – 0.683 (M)
1967		
1st half	0.518 – 0.700 (A)	0.528 – 0.712 (A)
2nd half	0.828 (M) – 0.843	0.843 (M) – 0.858
1968	0.499 (M) – 0.732	0.508 (M) – 0.745
1969	0.593 (F) – 0.692	0.603 (F) – 0.704
1970	1.235	1.257
1st half	0.660 (M) – 0.902	0.671 (M) – 0.917
2nd half	1.249 (M) – 1.581	1.271 (M) – 1.609
1971	1.191	1.212
1st half	1.417	1.442
2nd half	1.016	1.033
1972	0.925	0.942
1st half	0.925	0.942
2nd half	0.939	0.955
1973	1.649	1.679
1974	1.850	1.883
1975	n.a.	n.a.
1976(b)	0.848 (M)	0.941 (M)
1977(b)	1.118 (M)	1.217 (M)

Notes:

(a) The letters in parentheses identify the estimates based on data from Newton (N), Murphy (M), Adelman (A) and the Federal Trade Commission (F). The other data were based on Imperial Oil's selection of representative term charter market freight rates. (See text of appendix for complete reference.)

(b) For 1976/1977, the rates for shipments from Kharg Island, Iran were 0.925 (34°), 1.196 (34°).

* For 1958, the 1959 rate reported by Newton (N) was also used.

TABLE E-9

Estimates[a] of Term Charter Ocean Freight Rates from La Salina, Venezuela to Portland, 1960 to 1972 (in U.S. dollars per barrel)

Date	32° API Crude Oil
1960	0.181
1961	0.181
1962	0.174
1963	0.174 – 0.194 (C)
1964	0.151 – 0.197 (C)
1965	0.151 (M) – 0.190 (C)
1966	0.148 – 0.190 (C)
1967	
1st half	0.141 – 1.190 (C)
2nd half	0.181 – 0.226 (C)
1968	0.108 (M) – 0.196 (C)
1969	0.128 (F) – 0.187 (C)
1970	0.226 – 0.278
1st half	0.203 – 0.226
2nd half	0.278 – 0.356
1971	0.275
1st half	0.234 – 0.327
2nd half	0.327
1972	0.210
1st half	0.210
2nd half	0.213

Note:

(a) The letters in parentheses identify the estimates based on data from Clarkson (C), Murphy (M) and the Federal Trade Commission (F). The other data were based on Imperial Oil's selection of representative term charter market freight rates. (See text of Appendix for complete reference.)

TABLE E-10

Estimates(a) of Spot Ocean Freight Rates from the Persian Gulf to Portland 1960 to 1974 (in U.S. dollars per barrel)

Date	34° API	31° API
1960	0.663	0.675
1961	0.639	0.650
1962	0.711	0.724
1963	0.784 (N) – 0.856	0.797 (N) – 0.871
1964	0.772	0.785
1965	0.723	0.736
1966	0.651	0.663
1967	1.288 (N) – 1.469	1.311 (N) – 1.495
1st half	0.603	0.613
2nd half	2.334	2.376
1968	1.251 – 1.265 (N)	1.273 – 1.287 (N)
1969	0.982 (D) – 1.279 (M)	0.999 (D) – 1.302 (M)
1970	2.340 (D) – 2.363	2.381 (D) – 2.405
1st half	1.556	1.584
2nd half	2.939	2.991
1971	1.166	1.187
1st half	1.429	1.454
2nd half	0.903	0.919
1972	1.020	1.038
1st half	0.776	0.789
2nd half	1.279	1.301
1973	3.026	3.080
1974	1.988	2.023

Note:

(a) The letters in parentheses identify the estimates based on data from Newton (N), Murphy (M) and Dietze (D). The other data were based on the Clarkson estimates of spot ocean freight rates provided by Imperial Oil. (See text of appendix for complete reference.)

The freight rate data shown on these tables were supplemented by the information in Section (a) above, as well as from material available from the following sources.

Third-party term freight rates from the Persian Gulf to Portland, Maine were available from Newton for 1959, 1963, and 1966.[131] Freight rates for certain years were available from the 1969 U.S. Senate Report on *Government Intervention in the Market Mechanism: The Petroleum Industry.*[132] For example, term charter ocean freight rates of 60¢ and 62¢ were reported for 1968 by Shell and BP Trading. Adelman, in the above report cited term charter freight rates of 70¢ for early 1967 and for 1968 while the FTC estimated costs at 59¢ in 1969.

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[131] The rates for these years (88¢, 68¢, and 55¢ to 60¢) were for shipments to the U.S. East Coast North of Cape Hatteras, which was equivalent to shipments to Portland. See Exhibit S-5E and Exhibit I-51A, Tab II-5.

These supplementary freight rates were combined with the Imperial Oil estimates to derive a range of freight rates which were used with the FOB term third-party prices to generate C&F prices which were converted to CIF prices by adding 1 per cent (of the C & F price) for insurance. According to Newton, 1 per cent was the typical level of insurance premiums in the 1960s.[133] Newton also reported average annual spot ocean freight rates in 1959 (Intascale less 57.5 per cent), 1963 (Intascale less 35 per cent) and 1967/1968 (Intascale less 5 per cent). Spot Persian Gulf rates for 1969 ($0.982) and 1970 ($2.34) from Dietze were found in the Murphy tax case exhibits.[134] These were similarly used with the Murphy and Imperial Oil data to generate C&F and CIF spot prices.

Ocean freight rate data from other sources were used to supplement the Imperial Oil estimates only for those years in which the freight rates were initially agreed to. For example, while Murphy's contract with Associated Bulk Carriers Ltd. was for 1968 to 1970, the Intascale minus 62.5 per cent rate was used for 1968 only because only for that year would it be reliably representative of contracts of affreightment.

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[132] *Op.cit.*, *U.S. Senate Report*, March 11, 12, and 25, 1969, p. 7 (for Adelman); pp. 171 to 172 (for Blair's survey of prices from BP and Shell), and pp. 601-602 (for the FTC freight estimate).

[133] See Exhibit I-51A, Tab 11-5, p. 69.

[134] See *op.cit.*, Book III, tab 192.

F

FOB and CIF Prices Paid by Canadian Companies for Imports of Selected Crude Oils, 1958 to 1982

(Tables F-1 to F-12 in this Appendix were reviewed in Chapter VII, Imported Crude Oil and Refined Petroleum Products, 1958-1973 and in Chapter IX, Import of Crude Oil After 1973.)

TABLE F-1

Comparative FOB Costs of Imported Arabian Light (34.0 — 34.9° API) Crude Oil, 1958 to 1982
(US $ per barrel, Ras Tanura, Unless Otherwise Specified)

DATE	IRVING	GULF	SUN	IMPERIAL			TEXACO	BP	PETRO-FINA	IRVING Offshore		Term Third-Party Price Range (Sun Alternate Values)	Spot Third-Party	Competitive* Supply Price		Official Selling Price*	Tax Paid Cost	Posted Price*
	Saint John			Portland	Dartmouth	Average				50%	100%			10%	15%			
1958	—	n.a.	n.a.	—	—	—	n.a*	—	n.a.	—		n.a.	n.a.			n.a.	1.09	2.08
1959	—		n.a.	—	—	—	"	—	n.a.	—		1.60	n.a.			n.a.	1.00	1.92
Jan. 1							"			—								2.08*
Mar. 1							"			—								1.90
July 1		1.90					"			—								
1960			n.a.	—	—	—	"	—	—	—			1.63			1.86	0.95	1.86
Jan. 1	1.90	1.90					"			—								1.90
Aug. 9	1.80	1.80					"			—		1.33 - 1.59						1.80
1961	1.80	1.68	n.a.	—	—	—	"	—	—	—		1.62 - 1.66	1.57			1.80	0.95	1.80
1962	1.80	1.68	—	—	—	—	"	—	—	—		1.36	1.52			1.80	0.95	1.80
Jan. 1							"			—								
Aug. 1	1.80						"			—								
1963	"	—	—	—	—	—	"	—	—	—		1.40 - 1.67	1.50			1.80	0.95	1.80
1964	"	—	—	n.a.	n.a.	1.65	"	—	—	—		1.35 - 1.54	1.45	1.11	1.13	1.80	1.06	1.80
1965	"	—	—	1.61	1.65	1.62	"	—	—	—		1.35 - 1.58	1.42	1.11	1.13	1.66	1.06	1.80
1966	"	—	—	1.44*	—	1.44*	"	—	—	—		1.30 - 1.46	1.36	1.11	1.14	1.53	1.06	1.80
1967	"	—	—	1.47	—	1.47	"	—	—	—		1.34 - 1.55	1.33	1.11	1.14	1.50	1.06	1.80
1968	"	—	—	—	—	—	"	—	—	—		1.28 - 1.35	1.32	1.11	1.14	1.45	1.06	1.80
1969	"	—	1.58	—	—	—	"		—	—		1.18 - 1.30(1.30)	1.27	1.11	1.13	1.40	1.06	1.80
1970	"	—	1.58	—	—	—	"	1.35*	0.967*			1.25 -(1.30)	1.21	1.10	1.12	1.35	1.06	1.80
Sept.							"			n.a.								
1971	1.69*	—		—	—	—	"	—	—	1.49	1.30	(1.65)*- (1.70)*	1.69	1.45	1.47	1.75	1.374	2.19
Jan. 1	1.80		1.58				"			—		(1.29) - (1.30)	1.64	1.42	1.44	1.75	1.099	1.80
Feb. 15							"			—							1.371	2.18
June 1			1.92				"			—		(2.00)*- (2.10)*	1.74*	1.48	1.50	1.75	1.435	2.285
Aug. 1	1.85						"			1.45	1.05							
Nov. 14			1.75				"											
1972	1.95*	—	1.89	—	—	—	"	—	—	1.63	1.31		1.82	1.61	1.63	1.90	1.542	2.48
Jan. 1							"			—			1.77			1.90	1.435	2.285
Jan. 20							"			—							1.548	2.479
July 1							"			—			1.87			1.90	1.548	2.479

TABLE F-1 (cont'd)

	IRVING	GULF	SHELL	IMPERIAL		TEXACO		ULTRAMAR	PETRO-FINA	IRVING Offshore		Nfld.* Refining Company Contract	DOE Third-Party Rep.	Spot Third-Party	Weighted Average Cost	DOE Acq. Cost	Official Selling Price
						Company											
DATE	Saint John		PCB	Company	PCB	Portland	PCB	PCB		50%	100%						
1973	2.33*	—	—	—	—	n.a.*	—	—	—	1.79*	1.26*			2.81		n.a.	2.64
Jan.														2.08	1.778		2.10
Feb.															"		
March															"		
April	n.a.									n.a.	n.a.			2.35	1.848		2.25
May															"		
June												2.70			1.922		
July												2.75		2.70	1.948		2.55
August												2.85			2.000		
Sept.												2.85			2.123		
Oct. 1												2.80	3.84	4.10	2.085		3.65
Oct. 16												4.76			3.520		
Nov.												4.81	3.84		3.559		
Dec.												4.68	3.81		3.464		
		Company							Company								
1974	10.01*	10.39*		10.16	10.29	n.a.*			9.786*	9.35*	8.68*			10.98			9.56
Jan.	9.64						10.52			8.98	8.31	10.84	9.55	13.00	9.278	9.29	8.65
Feb.	9.97						12.14			9.31	8.64	"	9.59		"	9.56	
March	9.79						12.13			9.13	8.46	"	9.70		"	9.36	
April	9.87						10.74		PCB	9.21	8.54	"	9.70	10.60	"	9.44	9.60
May	—						9.84			—	—	"	9.75		"	9.60	
June	9.90						9.83		9.80	9.24	8.57	"	9.75		"	9.47	
July	—						9.89			—	—	"	9.88	10.00	9.322	9.51	9.60
August	9.97						9.90			9.31	8.64	"	9.88		"	9.46	
Sept.	10.05	PCB					9.90		9.80	9.39	8.72	"	9.88		"	9.47	
Oct.	10.39				10.14		10.18	10.42	10.30	9.73	9.06	"	10.28	10.30	9.802	9.84	10.40
Nov.	n.a.	10.51					10.37	10.76		n.a.	n.a.	10.46	10.46		10.237	10.36	
Dec.	10.74	10.51	10.45		10.46		10.38	10.76		10.08	941	"	10.46		"	10.36	

TABLE F-1 (cont'd)

	IRVING	TEXACO		SUN		GULF	IMPERIAL		ULTRAMAR	PETRO-FINA	IRVING Offshore							
		Company																
DATE	Saint John	Portland	PCB	Company	PCB	PCB	Company	PCB	PCB	PCB	50%	100%	Nfld.* Refining Company Contract	DOE Third-Party Rep.	Spot Third-Party	Weighted Average Cost	DOE Act. Cost	OGSP
1975		n.a.*				—	10.46	10.44										
Jan.	n.a.		10.38						10.75		n.a.	n.a.	10.46	10.47	10.42	10.244	10.36	10.463
Feb.	10.83		10.38	10.46					10.76		10.59	10.36	"	10.46		"	10.37	"
March	n.a.			10.46	10.45				10.69		n.a.	n.a.	"	10.46		"	10.37	"
April	—				10.46			10.45	10.66		—	—	"	10.46	10.42	"	10.26	"
May	n.a.		10.36	10.46	10.46			10.43	10.66		n.a.	n.a.	"	10.46		"	10.24	"
June	n.a.		10.42	10.46				10.44	10.66		n.a.	n.a.	"	10.46		"	10.26	"
July	—		10.42	10.46-.49	10.44						—	—	"	10.44	10.43	"	"	"
August	10.62		10.43	10.47	10.47						10.38	10.15	"	10.44		"	"	"
Sept.	10.63		10.42	10.51	10.51						10.39	10.16	"	10.46		"	"	"
Oct.	11.70		10.95	11.54	10.53						11.46	11.23	11.51	11.48	10.46	11.267	11.28	11.510
Nov.	11.59		11.48						11.69		11.35	11.12	"	11.48		"	"	"
Dec.	—		11.50	11.52-.54	11.52					11.52	—	—	"	11.49		"	"	"
1976		n.a.					—	—	—		n.a.	n.a.	—		11.63			11.510
Jan.	11.55		11.50	11.54	11.54									11.51	11.51	11.30	11.28	"
Feb.	11.64		11.51	11.54	11.53									11.51		"	"	"
March	—		11.51											11.49		"	"	"
April	11.63		11.50											11.49	11.51		"	"
May	11.64		11.50			11.52								11.50		"	"	"
June	11.59		11.50											11.49		"	11.26	"
July	—		11.50											11.49	11.60	"	11.28	"
August	11.55		11.49											11.50		"	"	"
Sept.	11.65		11.50											11.49		"	"	"
Oct.	11.54		11.50											11.51	11.90	"	"	"
Nov.	11.57		11.50	11.86	11.84									11.51		"	"	"
Dec.	11.64		11.51							11.44				11.51		"	"	"

TABLE F-1 (cont'd)

	SHELL	IRVING	SUN		GULF	TEXACO		ULTRAMAR					
						Company							
DATE	PCB	Saint John	Company	PCB	PCB	Portland	PCB	PCB	DOE Third-Party Rep.	Spot Third-Party	Weighted Average Cost	DOE Acq. Cost	OGSP
1977	—				—	n.a.*				12.57			12.40
Jan.		12.27					12.07		12.09	12.50	11.88	11.82	12.09
Feb.		12.20					12.09	12.10	12.09		"	"	"
March		12.31					12.04	12.08	12.09		"	"	"
April	12.96	12.34			12.08		12.03	12.06	12.09	12.45	"	"	"
May		12.23	12.09	12.10			12.05	12.11	12.09		"	"	"
June		12.24	12.92					12.08	12.09		"	"	"
July		—					12.68		12.70	12.63	12.49	12.42	12.70
August		12.83					12.62		"		"	"	"
Sept.		12.85					12.68		"		"	"	"
Oct.		12.94	12.73	12.73			12.69		"	12.68	"	"	"
Nov.		12.88					12.69		"		"	"	"
Dec.		12.46	12.73	12.73			12.69	12.70	"		"	"	"
1978	—				—			—		12.91			12.704
Jan.		12.78				13.65*	12.70		12.70	12.66	12.494	12.42	"
Feb.		12.76					12.70		"		"	12.43	"
March		12.80					12.69		"		"	"	"
April		12.74	12.62-.63	12.63			12.69		12.69	12.70	"	"	"
May		12.83	12.72						12.70		"	"	"
June		12.80	12.72	12.70			12.68		"		"	"	"
July		11.79							"	12.79	"	"	"
August		12.84					12.72		"		"	"	"
Sept.		12.79					12.69		12.71		"	"	"
Oct.		12.84					13.00		12.70	13.50	"	"	"
Nov.		12.78					12.69		"		"	"	"
Dec.		12.80					12.68		"		"	"	"

TABLE F-1 (cont'd)

	IRVING	SUN		GULF	TEXACO		IMPERIAL		ULTRAMAR						
					Company										
DATE	Saint John	Company	PCB	PCB	Portland	PCB	Company	PCB	PCB	DOE Third-Party Rep.	Spot Third-Party	Weighted Average Cost	DOE Acq. Cost	OGSP Adj.*	OGSP
1979		—	—				n.a.								
Jan.	13.69				13.68*	13.33				13.42	18.35	13.044	13.51	13.48	13.339
Feb.	13.60				14.50*	13.41				13.50		"	13.47		"
March	13.63				14.62**	13.51				13.50		"	13.49		"
April	14.71				15.56*	15.52			14.54	14.55	27.35	14.251	14.50	16.15	14.546
May	"					15.52		14.53		14.55		"	14.55		"
June	18.10					17.97				17.93		"	18.00		18.00
July	18.06				19.04*			17.97	17.98	18.00	32.90	17.705	"	18.89	"
August	18.12									18.00		"	"		"
Sept.	18.08					17.97		17.99		17.95		"	"		"
Oct.	18.05			23.04	18.00*	17.97		17.99		18.00	38.17	"	"	22.84	"
Nov.	24.01				24.00*	23.97		23.99		24.00		23.705	22.86		24.00
Dec.	24.00					23.97		23.99		24.00		"	24.00		"
1980				—	n.a.					n.a.					
Jan.	26.02					25.99		25.99			36.58	25.44	26.00	27.17	26.00
Feb.	25.96					25.99		25.99				"	"		"
March	26.03					25.98		25.99				"	"		"
April	28.04					27.98	28.00	27.99			35.52	27.684	28.00	28.82	28.00
May	28.79					27.97		27.98				"	"		"
June	28.06					27.97		27.98				"	"		"
July	28.09		29.53			27.97		28.89	27.97		33.30	"	"	30.21	"
August	30.84					29.97		30.00				"	29.25		30.00
Sept.	31.64	n.a.				29.98		30.00				"	30.00		"
Oct.	31.69					29.98		31.99				"	"		"
Nov.	30.40					31.98						"	32.00		32.00
Dec.	32.00					31.98		31.99				"	"		"

	SUN		IRVING	TEXACO		IMPERIAL		PETRO-FINA					
				Company									
DATE	Company	PCB	Saint John	Portland	PCB	Company	PCB	PCB	DOE Third-Party Max.	Spot Third-Party	Weighted Average Cost	DOE Acq. Cost	OGSP
1981				n.a.		n.a.		—	n.a.	n.a.			
Jan.			32.00		31.94		31.98				31.62	32.00	32.00
Feb.	n.a.		32.05		31.98						"	"	"
March		37.53	32.00				32.00				"	"	"
April	n.a.		"		31.98						"	"	"
May	n.a.	n.a.	"		31.97			32.11			"	"	"
June	n.a.		"		31.97		31.99				"	"	"
July	n.a.		"		31.97		31.99	n.a.			"	"	"
August	n.a.	33.36	"		32.76		31.99	32.01			"	32.03	"
Sept.			"		32.46		32.00				"	32.06	"
Oct.	n.a.		—		33.99		34.00				33.62	34.09	34.00
Nov.		34.93	34.00								"	34.12	"
Dec.	34.25	34.26	34.03					34.19			"	34.13	"
1982			n.a.	n.a.					n.a.	n.a.	n.a.		
Jan.		—				—	—					34.16	34.00
Feb.		n.a.			33.99	"	"						"
March		—				"	"	34.01					"
April	n.a.	—			33.99	"	"						"
May		n.a.			n.a.	n.a.	n.a.	n.a.					"
June		"			"	"	"	"					"
July		"			"	"	"	"					"
August		"			"	"	"	"					"
Sept.		"			"	"	"	"					"
Oct.		"			"	"	"	"					"
Nov.		"			"	"	"	"					"
Dec.		"			"	"	"	"					"

Column Notes:

1. *Irving*: From 1960 to the January to July 1971 price of $1.80, the figures shown under the Irving Saint John column reflect the August 14, 1957 agreement with SOCAL in which the FOB component of the CIF price is the posted price (see I-318A). The August 19, 1971 FOB price was derived by deducting from the CIF price of $2.90 the freight costs of $1.05 reported in I-257, tab 2. The monthly 1974 to 1981 prices were taken from exhibits I-265 to I-268. The *asterisked* average annual figures for 1971 to 1974 are from I-394. For August 1971 to 1975, annual (*asterisked*) and monthly offshore prices are calculated by deducting the net income per barrel per year earned by the offshore subsidiary from the Canadian purchase prices. These are listed as 100 per cent offshore prices. The 50 per cent offshore prices reflect Mr. Arthur Irving's statement that the offshore subsidiary's net income was to be shared evenly with SOCAL (see Appendix E for references and calculations). These prices were calculated by only deducting one half of the offshore subsidiary's net income per barrel from the purchase price on imports into Canada. The offshore figures for 1976 to 1981 are not available as the net income figures for the offshore subsidiary for those years were not provided by Irving Oil.
2. *Gulf*: The 1959 to 1961 prices are taken from the contracts (see I-16E, Nos. 19 and 21) covering those years which had price clauses which used posted prices (1959, 1960) or posted prices minus 12¢ (1961). Prices are shown for 1960 and 1961 because Exhibit I-360, Tab 1 shows imports for those years. The annual figure shown for 1974 was reported by Gulf in I-16E.
3. *Sun*: The 1969 to 1972 prices are the 34° prices reported in I-315B, tab 3 respecting imports reported in I-161. The first set of prices for 1975 to 1982 are 34° contract prices from I-315B. The other 1975 to 1982 prices are those reported to the PCB; their API levels have not been standardized to 34°.
4. *Imperial Oil*: The 1966 figures are based on FOB ex Sidon prices from which the Tapline pipeline charge of 37¢ has been deducted to convert the prices to FOB ex Ras Tanura. The 1974 and 1975 annual figures reported by Imperial are simple annualized monthly data while the annual PCB data are weighted (by volume) averages.

TABLE F-1 (cont'd)

Notes to Table F-1 on Comparative FOB Costs of Imported Arabian Light (34.0 — 34.9° API) Crude Oil, 1958 to 1982

Column Notes:

5. *Texaco*: For the years marked by *n.a.**, Texaco provided information on ocean loss and AFRA freight rates which could be used to derive FOB prices from the CIF prices in Table 2. These are not shown because AFRA freight rates produce FOB prices which are biased low. The 1978 and 1979 figures reported by Texaco in Exhibit I-158 are FOB Caribbean transshipment point. The figure shown for March 1979 is for February 5.

6. *BP*: For 1970, the figure shown is based on an FOB price ex Sidon ($1.72) from which the Tapline pipeline charge of 37¢ has been deducted to convert the price to FOB ex Ras Tanura. The price effective for January 1, 1969 reported on an October 27, 1969 price sheet in I-289, tab 4 was used for 1970. Imports via the Portland pipeline to Montreal were only reported for 1970 in I-291; I-289, tab 4 shows that imports directly to Montreal by ship also did not occur in 1969.

7. *Petrofina*: The *asterisked* figures shown for 1970 and 1974 are the average annual Canadian purchase or import prices (of 34.3° and 33.4° crude oil, respectively) reduced by the Pannac (i.e., offshore subsidiary) dividend per barrel. No API adjustments were required as the gravity of the imports were within the contract margin for variations (33.0 to 34.9°). PCB figures are also shown in 1974 as well as in 1975, 1976 and 1981.

8. *Term Third-Party Price Range*: The minimum and maximum values shown here represent term transactions prices from several sources. Some 1960 to 1967 prices are found in Adelman's 1958 to 1967 survey in *The World Petroleum Market* (*W.P.M.*), pp. 384 to 397 (see Exhibit I-51A, Tab II-4). The original Adelman price data had been standardized to 31.0 API and adjusted for sulphur levels using 1.5¢ per API degree and 1¢ per barrel, respectively for Arabian light 34.0° crude oil. The prices shown here were obtained by reversing the procedure used by Adelman; that is, by adding 5.5¢ per barrel. Adelman's FOB calculations were further corrected for rounding errors whenever actual discount levels from posted prices were reported. Some 1968 to 1969 figures are taken from Blair's evidence to the U.S. Senate (see Appendix E for references). Certain 1969 and 1970 prices are from Adelman's price survey for 1968 to 1970 in *W.P.M.* at pp. 417-421. For 1959 to 1969, prices are also taken from those reported by Newton to the U.S. Senate (see Exhibit S-5E, as well as I-51A, Tab II-5). For 1969 to 1970, Sun Alternate Values from Exhibit I-188 dated May 10, 1971 are also available and are shown in parentheses. Other third-party or alternate value price estimates for 1969 to 1971 were found in Sun Exhibits I-16A, tab 5, pp. 84108-84109; I-188, p. 83927 and I-198, p. 83917. When these are added to the Sun alternate values in I-188, the price ranges are: $1.25 to $1.40 (for 1969); $1.26 to $1.30 (for 1970); $1.29 to $1.30 (for the first half of 1971); $2.00 to $2.10 (for the second half of 1971) and $1.65 to $1.70 (the average annual price for the year 1971). It may be noted that the estimates for 1971 were reported in memos dated in April and May of that year. Accordingly the *asterisked* figures for 1971 were less reliable. The $1.40 value for 1969 is not used because it was revised downwards in subsequent memos. For 1973 to 1979, US DOE representative or median prices provide a source of third-party prices reported by US corporations.

9. *Spot Third-Party*: These represent prices on sales involving single cargoes, but in the early 1960s the coverage was greater. For 1971, the price shown for June 1 is for July to December. See I-18 and I-23.

10. *Competitive Supply Price*: These are the Director's estimates of the minimum price required to cover the costs of production, including return on capital, and tax paid cost (see I-79).

11. *Tax Paid Cost*: This refers to the cost of equity crude oil. It includes operating/production costs and the host government's taxes and royalties (see Appendix E).

12. *Official Selling Price*: For 1958 to 1974, the prices reflect the long-term contract prices under which the bulk of crude oil was sold; from 1975 onwards the figures are official government prices (OGSP) applicable to sales to third-party buyers.

13. *Posted*: The price shown for March, 1959 is actually for February 13. The posted price for Sidon was the Ras Tanura price plus 37¢ (for pipeline costs) from 1958 to 1967 (see Appendix E for references).

14. *Newfoundland Refining Company Contract*: The prices shown for 1973 to 1975 are based on a contract with Petromin (the Saudi Arabian government's petroleum corporation) with prices to be set at posted price minus 7 per cent.

15. *DOE Third-Party Rep*: Representative price was defined by the United States Department of Energy (DOE) as being the lowest price at which 50 per cent or more (by volume) of third-party (i.e. arm's length) transactions took place per month. That is, the weighted median price. See I-84 and the U.S. Federal Register references listed in Appendix E.

16. *Weighted Average Cost*: From 1973 to 1981, the weighted average cost figures reflect the acquisition costs in addition to tax paid cost resulting from nationalization. Weighted average cost calculations became necessary in 1973 when crude oil production was partially nationalized (i.e. by 25 per cent). Aside from their 75 per cent equity share of production, the companies were obligated to buy back 22.5 percentage points of the government's 25 per cent share; the remaining 2.5 percentage points were sold to third-party buyers by the government. The buy-back price was set at $2.32/barrel until September, 1973 when it was fixed at 93 per cent of the posted price. In calculating the weighted average cost of crude oil supplies per company, the weights for the equity (at tax paid cost) and buy-back crude oil were 73.68 and 26.32 per cent, respectively. (These figures were obtained by taking 75 and 22.5 as a percentage of 97.5, the proportion of total crude oil production which moved through company channels.) When nationalization or participation increased to 60 per cent in 1974, the companies were obliged to buy 55 percentage points of the government's 60 per cent share, the remainder again being sold to third-party buyers by the government. Therefore, the respective weights for the 1974 and 1975 weighted average cost calculations became 42.1 and 57.9 per cent (i.e. 40 and 55 as a percentage of 95). For 1976 to 1981, the figures are from *International Crude Oil and Product Prices* (see Exhibit I-80). The ICOOP figures are adjusted for discounts or premiums applicable to former concession owners.

17. *DOE Acquisition Cost*: These are taken from Exhibit I-80. According to the testimony of Brant/Davidson, the data were taken from term arm's length acquisition cost figures reported to the U.S. Department of Energy (DOE). Where more than one figure was available per month, Brant testified that the highest figure was chosen. If more than one figure per month was reported per company, only the latest or revised figure reported by that company was considered (see TS Vol. 7, p. 13348).

18. *OGSP Adjusted*: For 1979 and 1980, the figures shown represent official government selling prices adjusted for any discounts or premiums applicable to all buyers (see I-18 and I-23).

TABLE F-2

Comparative Delivered (CIF) Costs of Imported Arabian Light (34.0 — 34.9° API) Crude Oil, 1958 to 1982
(US $ per barrel, Portland, Unless Otherwise Specified)

	IRVING	TEXACO			SUN	IMPERIAL			GULF	BP	PETROFINA	IRVING		Term Third-Party Price Range (Sun Alternate Values)	Spot Third-Party Price Range
DATE	Saint-John	Portland	Halifax	Average		Portland	Dartmouth	Average				Offshore 50%	Offshore 100%		
1958	—	3.00	—	3.00	n.a.	—	—	—	n.a.	—	n.a.	—	—	n.a.	n.a.
1959	—	2.81	—	2.81	n.a.	—	—	—	n.a.	—	n.a.			2.51	n.a.
Jan.1		3.00	—	3.00		—	—	—				—	—		
Mar.1		2.86	—	2.86		—	—	—							
Apr.15		2.79	—	2.79		—	—	—							
May 1		2.76	—	2.76		—	—	—							
1960	2.682	2.68	—	2.68	n.a.	—	—	—	n.a.	—	—	—	—	2.01-2.28	2.32
Aug.9	2.582		—			—	—	—							
1961	2.58	2.59	—	2.59	n.a.	—	—	—	n.a.	—	—	—	—	2.31-2.35	2.23
Jan.1		2.68	—	2.68		—	—	—		—	—				
Feb.1		2.58	—	2.58		—	—	—		—	—				
1962	2.58	2.51	—	2.51	—	—	—	—	n.a.	—	—	—	—	2.02	2.25
Jan.1		2.58	—	2.58	—	—	—	—		—	—				
Aug.1		2.43	—	2.43	—	—	—	—		—	—				
1963	2.58	2.43	—	2.43	—	—	—	—	—	—	—	—	—	2.06-2.37	2.31-2.38
1964	2.58	2.43	—	2.43	—	n.a.	n.a.	2.27	—	—	—	"	"	1.92-2.12	2.24
1965	2.58	2.33	2.35	2.33	—	2.26	2.22	2.25	—	—	—	"	"	1.92-2.27	2.16
1966	2.58	2.33	—	2.33	—	2.29	—	2.29	—	—	—	"	"	1.86-2.15	2.03
1967	2.58	2.33	2.33	2.33	—	2.19	—	2.19	—	—	—	"	"		2.64-2.83
Jan.														1.88-2.27	1.95
July														2.19-2.42	3.70
1968	2.58	2.33	2.33	2.33	—	—	—	—	—	—	—	"	"	1.80-2.10	2.60-2.61
1969	2.58	2.33	2.33	2.33	2.33	—	—	—	—	—	—	"	"	1.79-2.01(2.01)	2.28-2.57
1970	2.58	2.28	2.28	2.28	2.39	—	—	—	—	2.00*	2.71*	—	—	2.51-(2.56)	3.59-3.61
Jan.														1.93-(2.22)	2.79
July														2.52-(2.91)	4.19
Sept.1												2.30*	2.025*		

TABLE F-2 (cont'd)

DATE	IRVING	TEXACO			SUN	IMPERIAL			GULF	BP	PETROFINA	IRVING		Term Third-Party Price Range (Sun Alternate Values)	Spot Third-Party Price Range
	Saint-John	Portland	Halifax	Average		Portland	Dartmouth	Average				Offshore 50%	Offshore 100%		
1971	2.80*	2.91	2.95	n.a.		—	—	—	—	—	—	2.60*	2.41*	(2.87)*-(2.92)*	2.89
Jan. 1	2.58	2.69	2.69	2.69	2.39	—	—	—		—	—	—	—	(2.73)-(2.74)	3.10
Feb. 15		2.96	2.96	2.96		—	—	—		—	—				
June 1		3.03	3.03	3.03	2.73	—	—	—		—	—				
July														(3.05)*-(3.15)*	2.67
Aug.	2.90											2.502	2.104		
Nov. 14					2.56										
1972	2.89*	2.93	3.00	n.a.	2.70	—	—	—	—	—	—	2.57*	2.25*	n.a.	2.87
Jan. 1		3.03	3.03	3.03		—	—	—		—	—				2.57
Jan. 20		3.145	3.145	3.145		—	—	—		—	—				
July 1		2.90	2.90	2.90		—	—	—		—	—				3.18

	IRVING	TEXACO				SHELL		GULF		IMPERIAL		ULTRAMAR	PETROFINA		IRVING			
		Company													Offshore			
DATE	Saint John	Portland	Halifax	St-Romuald	PCB	Com-pany	PCB	Com-pany	PCB	Com-pany	PCB	PCB	Com-pany	PCB	50%	100%	Term Third-Party	Spot Third-Party
1973	3.57*	3.27	3.38		—	—	—	—	—	—	—	—	—	—	3.03*	2.50*		5.89
Jan.		3.075	3.08															5.16
Feb.		"	"															
March		"	"															
April	3.272	3.170	3.17												2.97	2.667		5.43
May		"	"															
June		3.268	3.27															
July		3.939	3.88	4.33														5.78
August		4.009	3.95	4.399														
Sept.		4.120	4.06	4.510														
Oct. 1		4.437	4.37	5.047													5.54	7.20
Oct.16		5.873	5.803	6.483														
Nov.		5.913	5.843	6.523													5.54	
Dec.		5.816	5.746	6.426													5.51	
1974	11.91*					n.a.		n.a.		11.65	10.69		11.32*		11.25*	10.58*		13.10
Jan.	11.63	12.091	12.001	12.891*	11.22										10.97	10.30	11.51	15.14
Feb.	11.74	"	"	"	13.06										11.08	10.41	11.55	
March	11.80	"	"	"	13.01										11.14	10.47	11.67	
April	11.90	11.76	11.70	11.79*	12.09										11.24	10.57	11.67	12.71
May		"	"		11.61												11.72	
June	11.84	"	"	"	11.61									11.25	11.18	10.51	11.72	
July		11.71	11.65	11.74*	11.53												11.85	12.11
August	11.84	"	"	"	11.58										11.18	10.51	11.85	
Sept.	11.78	"	"	"	11.56									11.10	11.12	10.45	11.85	
Oct.	11.99	11.96	11.90	11.99*	11.90						10.57	12.87		11.55	11.33	10.66	12.25	12.41
Nov.	12.43	12.14	12.08	12.17*	11.95				11.55			12.80			11.77	11.10	12.43	
Dec.	12.51	12.14	12.08	12.17*	11.99		12.05		10.98		10.82	12.91			11.85	11.18	12.43	

TABLE F-2 (cont'd)

	SUN OIL		TEXACO			IRVING		GULF		IMPERIAL		ULTRA-MAR	PETROFINA		IRVING			
			Company												Offshore			
DATE	Company	PCB	Portland	Halifax	St-Romuald	PCB	Saint John	Company	PCB	Company	PCB	PCB	Company	PCB	50%	100%	Term Third-Party	Spot Third-Party
1975	n.a.				—			—	—	11.75	10.83						n.a.	n.a.
Jan.			12.04	11.98	—	11.92	11.92					12.91			11.68	11.45		
Feb.	n.a.		"	"	—	11.91	11.85					12.92			11.61	11.38		
March	n.a.	13.50	"	"	—		11.84					12.67			11.60	11.37		
April		11.70	12.08	12.03	—		—				10.84	12.59			—	—		
May	11.70	11.70	"	"	—	11.94	11.17				10.82	12.59			10.93	10.70		
June	11.70		"	"	—	11.95	11.86				10.83	12.59			11.62	11.39		
July	11.70-.73	13.49	12.05	12.01	—	11.84	—								—	—		
August	n.a.	12.34	"	"	—	11.93	11.84								11.60	11.37		
Sept.	n.a.	12.69	"	"	—	11.78	11.85								11.61	11.38		
Oct.	n.a.	12.85	13.17	13.13	—	12.47	12.90								12.66	12.43		
Nov.			"	"	—	13.02	12.79					13.27			12.55	12.32		
Dec.	n.a.	12.84	"	"	—	12.99	—							12.77	—	—		
1976								n.a.		—	—	—	n.a.		n.a.			12.68
Jan.	n.a.	12.86	13.00	13.01	13.11	13.01	12.88										12.48	12.56
Feb.	n.a.	12.87	"	"		13.01	12.88										12.48	
March			"	"		13.00	—										12.46	
April			"	"		13.00	12.90										12.46	12.56
May			"	"		12.99	12.85		12.80								12.47	
June			"	"		12.99	12.88										12.46	
July			12.77	12.74		12.73	—										12.46	12.65
August			"	"		12.75	12.85										12.47	
Sept.			"	"		12.75	12.86										12.46	
Oct.			12.86	12.87		12.85	12.83										12.48	12.95
Nov.	n.a.	12.98	"	"		12.85	12.78										12.48	
Dec.			"	"		12.87	12.80							12.34			12.48	

TABLE F-2 (cont'd)

	TEXACO			IRVING	SUN OIL		SHELL		GULF		ULTRAMAR		
	Company												
DATE	Portland	Halifax	PCB	Saint John	Company	PCB	Company	PCB	Company	PCB	PCB	Term Third-Party	Spot Third-Party
1977							n.a.		n.a.				13.91
Jan.	13.39	13.56	13.52	13.45								13.34	13.84
Feb.	"	"	13.38	13.79							13.75	"	
March	"	"	13.34	13.48							13.91	"	
April	"	"	13.34	13.51				13.26		13.03	14.04	"	13.79
May	"	"	13.42	13.48	n.a.	13.08					14.05	"	
June	"	"		13.45	n.a.						14.15	"	
July	14.00	14.17	13.98	—								13.96	13.97
August	"	"	14.10	14.02								"	
Sept.	"	"	14.16	14.03								"	
Oct.	"	"	14.17	14.00	n.a.	13.68						"	14.02
Nov.	"	"	14.02	"								"	
Dec.	"	"	14.03	"	n.a.	13.66					14.53	"	
1978							—	—	—	—	—	n.a.	n.a.
Jan.	13.99	14.08	13.99	13.99									
Feb.	"	"	13.98	13.94									
March	"	"	13.99	14.04									
April	"	"	13.92	14.01	n.a.	13.51							
May	"	"		"	n.a.								
June	"	"	13.99	13.98	n.a.	13.66							
July	"	"		14.03									
August	"	"	14.01	"									
Sept.	"	"	13.95	14.02									
Oct.	"	"	14.31	14.12									
Nov.	"	"	14.23	14.15									
Dec.	"	"	14.18	14.33									

TABLE F-2 (cont'd)

	SUN OIL		IRVING	TEXACO				GULF		IMPERIAL		ULTRA-MAR
				Company								
DATE	Company	PCB	Saint John	Portland	Halifax	St-Romuald	PCB	Company	PCB	Company	PCB	PCB
1979	—	—				—		n.a.		n.a.		
Jan.			15.43	14.22			14.91					
Feb.			15.32	15.04			14.92					
March			15.21	15.16*	15.33		14.82					
April			16.38	16.10			17.06					16.18
May			16.46	"			17.05				16.07	
June			19.89	"			19.59					
July			19.90	19.58							19.65	18.67
August			20.10	"								
Sept.			20.41	"			19.68				19.80	
Oct.			20.38	19.91			19.95		24.86		19.84	
Nov.			26.26	25.71			25.52				25.98	
Dec.			26.30	"			26.10				25.90	
1980					n.a.	n.a.		—	—	n.a.		
Jan.			28.46				27.96				27.99	
Feb.			28.56				27.97				27.75	
March			28.54				28.04				27.94	
April			30.38				29.91				29.83	
May			30.35				29.80				29.70	
June			30.31				29.85				29.60	
July		31.41	30.36				29.68				30.89	29.98
August			32.07				31.97				31.92	
Sept.	31.07*		31.87				31.93				32.37	
Oct.			32.05				32.01				34.25	
Nov.			32.42				34.19					
Dec.			34.79				34.26				34.29	

DATE	TEXACO Company Portland	 Halifax	 St-Romuald	 PCB	IMPERIAL Company	 PCB	IRVING Saint John	SUN OIL Company	 PCB	PETROFINA Company	 PCB
1981	n.a.	n.a.	n.a.		n.a.					n.a.	
Jan.				34.14		34.29	34.07				
Feb.				34.19			34.32	37.32*			
March						34.18	34.23		37.83		
April				34.38			33.97	37.54*			
May				34.00			34.07	34.27	n.a.		33.87
June				34.08		33.79	34.04	34.27			
July				34.00		34.17	33.96	34.22			n.a.
August				34.82		34.11	33.87	33.77	33.68		33.99
Sept.				34.45		34.63	33.97				
Oct.				36.02		36.38	—	33.35*			
Nov.							36.03		35.41		
Dec.							36.04	n.a.	35.78		36.17
1982	n.a.	n.a.	n.a.		—	—	n.a.	n.a.		n.a.	
Jan.									—		
Feb.				35.95					n.a.		
March									—		35.51
April				n.a.				31.82	—		
May	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
June	"	"	"	"	"	"	"	"	"	"	"
July	"	"	"	"	"	"	"	"	"	"	"
August	"	"	"	"	"	"	"	"	"	"	"
Sept.	"	"	"	"	"	"	"	"	"	"	"
Oct.	"	"	"	"	"	"	"	"	"	"	"
Nov.	"	"	"	"	"	"	"	"	"	"	"
Dec.	"	"	"	"	"	"	"	"	"	"	"

TABLE F-2 (cont'd)

Notes to Table F-2 on Comparative Delivered (CIF) Costs of Imported Arabian Light (34.0 — 34.9° API) Crude Oil, 1958 to 1982

Column Notes:

1. ***Irving***: From 1960 to the January to July 1971 price of $2.58, the Saint John purchase or import CIF prices are based on the August 14, 1957 contract with SOCAL (Exhibit I-318A) in which the $2.712 price was to vary with changes in the posted FOB price of $1.93 as of July 1, 1956. For the August 1971, the April 1973, the annual (*asterisked*) prices for 1971 to 1974 and the monthly prices for 1974 to 1981, see Exhibits I-257, Tab 2, I-272, I-394, I-265, I-266, I-267 and I-268. For 1971 to 1975, 100 per cent and 50 per cent net offshore prices were derived by deducting the net income per barrel of Bomag-Irvcal (i.e. the offshore subsidiary). See note to Table 1 for the rationale. The offshore figure for September 1970 is based on a negotiated $2.025 market price found in a draft agreement between Irving Refining Limited and Chevron Oil Sales Company (SOCAL) which was reported to have never been signed (see Exhibit I-257 at Tab 1). The $2.30 price shown is the mid point between the $2.025 and $2.58 prices. The offshore figures for 1976 to 1981 are incomplete because net income figures for the offshore subsidiary were not available.

2. ***Gulf***: Freight costs were not available to add to the FOB prices in Table 1 for 1959 to 1962.

3. ***Sun***: See note on Table 1. The CIF 34° prices shown for 1969 to 1972 are based on 34° FOB prices from Table 1 and freight costs reported in I-161. For 1971, the average of the 1970 and 1972 freight costs was used. The first set of prices for 1975 to 1982 are 34° contract prices from I-315B; the ***asterisked*** figures in 1980 and 1981 are FOB prices at the Caribbean transshipment terminal (i.e., Curacao, Freeport or Aruba). The PCB prices for 1975 to 1982 have not been standardized to 34°.

4. ***Imperial***: The annual company figures shown for 1974 and 1975 are simple annualized monthly prices based on CIF Montreal prices from which the pipeline tariff has been deducted; the annual PCB figures are weighted (by volume) averages.

5. ***Texaco***: The 1970 prices are based on a 33° price of $2.26 shown on I-158. For 1974, no imports were reported for St-Romuald; for 1979, the March figure is for February 5.

6. ***BP***: See note in Table 1.

7. ***Petrofina***: The 1970 and 1974 ***asterisked*** figures are the average annual Canadian purchase or import prices reduced by the Pannac (i.e., offshore subsidiary) dividend per barrel. PCB figures are also shown in 1974, as well as, in 1975, 1976 and 1981.

8. ***Term Third-Party Price Range***: These figures represent the minimum and maximum CIF prices calculated by adding to the FOB Term Third-Party Price Range data of Table 1 the term charter transportation cost estimates cited in Appendix E. Insurance costs at 1 per cent of the C & F price were also included. For 1973, 1974 and 1976 to 1977, US DOE third-party representative or median term prices were also used as FOB prices to calculate CIF prices.

9. ***Spot Third-Party Price Range***: These figures were calculated by adding to the Spot third-party price data of Table 1, the spot transportation cost estimates cited in Appendix E and including one per cent of the laid down cost to cover insurance.

TABLE F-3

Comparative FOB Costs of Imported Iranian Light (34.0 – 34.9° API) Crude Oil, 1958 to 1980
(US $ per barrel)

DATE	IRVING	GULF	IMPERIAL	SUN	SHELL	TEXACO	BP	PETRO-FINA	MURPHY						
	Saint John								Estimated Offshore	BP and (Esso) Contracts	Nfld. Refining Company*	Term Third-Party Price Range	Spot Third-Party	Tax Paid Cost	Posted
1958	—	n.a.	n.a.	n.a.	—	—	—	n.a.	—	—	—	1.79	n.a.	n.a.	2.04
1959						n.a.*							"	"	2.04
Feb.	—	n.a.	n.a.	n.a.	—		n.a.	n.a.	—	—	—	1.56	"	"	1.86
1960	1.86					n.a.*	1.79*							"	1.86
August	1.78	—	n.a.	n.a.	—		1.68*	1.71*	—	—	—	1.43-1.56	1.79	"	1.78
						n.a.*								"	
1961	1.78	—	—	n.a.	—		1.43*	—	—	—	—	1.43	1.60	"	1.78
1962	1.78	—	—	—	n.a.	n.a.*	1.43*	—	—	—	—	1.38-1.43	1.55	"	1.78
1963	1.78	1.66	—	—	n.a.	—	1.43*	—	—	—	—	1.38-1.52	1.50	"	1.78
1964	1.78	1.66	1.60	—	—	—	1.43*	—	—	—	—	1.29-1.53	1.45	"	1.78
1965	1.78	1.47							—	1.35		1.27-1.55		"	1.78
Nov.	1.79	1.45	—	—	—	—	1.42*	—			—		1.40	"	1.79
1966	1.79	—	—	—	—	n.a.*	1.42*	—	—	1.35	—	1.07-1.50	1.28	"	1.79
1967										1.35		1.18-1.54			
Dec.	1.79	1.44	—	—	—	n.a.*	1.42*	—	—	1.33	—		1.28	0.95	1.79
1968	1.79	1.44	—	—	—	n.a.*	1.42*	—	—	1.33	—	1.18-1.43	1.27- 1.35	0.96	1.79
1969	1.79	—	—	—	—	n.a.*	1.30	—	—	1.33	—	1.24-1.35			1.79
Jan.													1.31- 1.34		
April										1.32					
May										1.33					
June										1.31					
July										1.31					
August										(1.27)					
Sept.										(1.27)					
Nov. 2										(1.28)					
Nov. 20										(1.27)					
1970	1.79	—	—	—	—	n.a.*	1.30	0.95*		1.33		1.14 to 1.28		1.017	1.79
Jan.										(1.27)			1.28		
March										(1.27)					
April									1.395		1.275			1.103	
June												1.25*-1.28*			
Nov.									1.395	1.36	1.361	1.31*-1.36*			

TABLE F-3 (cont'd)

DATE	IRVING	GULF	BP	TEXACO	SUN		PETRO-FINA	MURPHY		IRVING Offshore					
	Saint John					Nfld. Refining Company*		Estimated Offshore	BP Trading Contracts	50%	100%	Term Third-Party	Spot Third-Party	Tax Paid Cost	Posted
1971	1.68*	1.82		n.a.*	n.a.		1.34*			1.48*	1.29*	n.a.	n.a.		
Jan.	1.79	1.455	1.37			1.361			1.312	—	—			1.103	1.79
Feb. 15		1.75	1.65			1.628			1.582					1.370	2.17
May								1.598							
June		1.81	1.72			1.691		1.597	1.646					1.433	2.274
July						1.696		1.578	"						
August	1.85							1.463-1.66	"	1.65	1.46				
Sept.								1.661	"						
Oct.								1.672	"						
Nov.								1.672	"						
Dec.									"						
1972	1.95*	1.89		n.a.*	—		1.51*			1.63*	1.31*	n.a.	n.a.		
Jan.		1.81	1.72			1.696		1.663	1.646					1.433	2.274
Jan. 20		1.93	1.84			1.813			1.766					1.550	2.467
Feb.								1.67							
March															
April															
May															
June															
July						1.818									

TABLE F-3 (cont'd)

	GULF		TEXACO		SUN OIL		IRVING	BP			PETRO-FINA	MURPHY		IRVING Offshore		DOE Third-Party Rep.	Acq. Cost	DOE Cost	OGSP
DATE	Company	PCB	Company	PCB	Company	PCB	Saint John	Company	PCB	Nfld. Refining Company*	Company	Estimated Offshore	BP Contract	100%	50%				
1973	—	—	—	—	2.90	—	2.48*	2.84	—		1.61*			1.41	1.94*	—	n.a.	n.a.	—
Jan.								2.05		1.885			1.835						
Feb.																			
March																			
April							n.a.	2.14		1.976			1.928	n.a.	n.a.				
May					2.20														
June					n.a.			2.24		2.071									
July					"			2.28		2.11									
August					"			2.35		2.176									
Sept.					"														
Oct. 1					"					2.143						4.28			
Oct. 16					"			4.06		3.565									
Nov.					"			4.06		3.601						4.28			
Dec.					"			3.96		3.512		n.a.				4.23			
					(Third-Party*)		PCB				(PCB)		Murphy PCB*						
1974			n.a.*		10.80		8.43*			n.a.	7.64*			7.10*	7.77*				
Jan.	10.28			10.49			—	9.17	10.02		(9.81)*	n.a.	9.31			10.57	9.606	9.56	11.163
Feb.	"	10.38		"	(9.94*)	10.33	9.86	9.44*	"		(9.81)*	9.326	9.29	8.53	9.20	11.62	"	"	"
March	"	"		"			9.90		10.00			9.318		8.57.	9.24	10.62	"	"	"
April	"			10.06	(10.97*)	11.30	—		9.92		(9.81)*			—	—	11.09	"	9.63	"
May	"	10.38		10.05			9.84		9.88					8.51	9.18	10.94	"	"	"
June	10.41	9.93		"	(9.93*)		"							"	"	10.90	"	9.62	11.263
July	10.01*			10.20	(10.11*)	10.37	10.02	9.44						8.69	9.36	10.68	9.702	9.66	"
August	10.55	10.49			(10.11*)	10.27	—				(9.95)*			—	—	10.46	"	"	"
Sept.				10.20			10.20				(9.95)*			8.87	9.54	10.29	"	9.62	"
Oct.				10.39			—	9.19	9.06					—	—	10.50	10.037	9.98	11.044
Nov.	11.59*	10.83		10.57	10.52	10.52	—	n.a.	10.80					—	—	10.64	10.45	10.42	10.672
Dec.	11.02*	10.88		"	10.525	10.42	—	n.a.	10.73					—	—	10.70		10.44	"

TABLE F-3 (cont'd)

DATE	IRVING Saint John	TEXACO		BP		SHELL	SUN OIL	GULF		MUR-PHY	ULTRA-MAR	PETRO-FINA	IRVING Offshore		DOE Third-Party Rep.	Acq. Cost	DOE Cost	OGSP
		Company	PCB	Company	PCB	PCB	Company and PCB	Company	PCB	PCB	PCB	PCB	100%	50%				
1975		n.a.*						n.a.		—								
Jan.	10.86			10.77	10.78				10.68			10.68*	10.39	10.62	10.68	10.452	10.55	10.672
Feb.	10.74		10.57						"			"	10.27	10.50	10.67	"	10.50	"
March	n.a.		10.57		10.68		10.67		"		11.00	"	n.a.	n.a.	10.68	"	10.49	"
April	—			10.76	10.60	10.67	"		"			"	—	—	10.60	"	10.46	"
May	—				10.60		"		10.46			"	—	—	10.65	"	10.47	"
June	n.a.		10.69		10.64	10.67	10.67*		10.68		10.92	"	n.a.	n.a.	10.64	"	10.49	"
July	—		10.67		10.76								—	—	10.62	"	10.47	"
August	—			10.74	10.74								—	—	10.63	"	"	"
Sept.	—												—	—	10.61	"	"	"
Oct.	11.84			11.62	11.62							11.63*	11.37	11.60	11.53	11.40	11.62	11.620
Nov.	11.86				"							11.63*	11.39	11.62	11.59	"	11.42	"
Dec.	11.78				"		11.63					11.63*	11.31	11.54	11.56	"	"	"
1976		n.a.	n.a.					n.a.		PCB (Contract)	—		n.a.					
Jan.	11.78			11.62	11.62				11.56			11.63			11.56	11.40	11.40	11.62
Feb.	—			"	"		11.50		"			11.62			11.56	"	11.42	"
March	11.86			"	"		11.61		11.55			"			11.56	"	"	"
April	11.69			"	11.61										11.57	"	"	"
May	—			"	11.62		11.61		11.56	(11.62)		11.60			11.59	"	"	"
June	—			"	11.60	11.60	11.64		"	11.63					11.58	"	"	"
July	—			"											11.55	"	"	"
August	—			"			11.54			11.63					11.56	"	"	"
Sept.	11.84			"						11.63					11.56	"	11.40	"
Oct.	11.77			"											11.57	"	"	"
Nov.	—			"						11.56					11.62	"	11.42	"
Dec.	11.73			"											11.59	"	"	"

DATE	IRVING	SUN OIL	SUN OIL	GULF	MURPHY	MURPHY	PETRO-FINA	ULTRAMAR	DOE Third-Party Rep.	Acq. Cost	DOE Cost	OGSP
	Saint John	Company	PCB	PCB	PCB	Contract Prices	PCB	PCB				
1977												
Jan.	—				12.82				12.77	12.59	12.81	12.81
Feb.	12.98	12.81		12.79	"		12.80		12.78	"	"	"
March	—	12.78			"				"	"	12.62	"
April	12.92		12.81						"	"	12.64	"
May	—				12.82			12.66*	12.79	"	"	"
June	—	12.91			"				12.78	"	"	"
July	—		12.91			12.81			12.76	"	"	"
August	—					"			12.76	"	"	"
Sept.	—					"			12.75	"	12.81	"
Oct.	—				12.82	"			"	"	"	"
Nov.	—				12.80	"			"	"	12.63	"
Dec.	—				12.82	"			"	"	"	"
1978				—	—	—	—	—				
Jan.	—								12.75	12.59	12.81	12.81
Feb.	—								12.77	"	"	"
March	—								12.74	"	"	"
April	12.99								12.76	"	12.67	"
May	—							12.80	12.74	"	12.69	"
June	12.88	12.62	12.62					12.80	12.73	"	12.59	"
July	—								12.70	"	12.66	"
August	12.93		12.59						12.72	"	"	"
Sept.	12.91		12.65						12.75	"	"	"
Oct.	—	n.a.							12.72	"	"	"
Nov.	—								12.81	"	12.69	"
Dec.	—								12.81	"	12.66	"

DATE	BP	BP	PETRO-FINA	Acq. Cost	DOE Cost	OGSP
	Company	PCB	PCB			
1979						
Jan.	13.45			13.23	19.21	13.45
Feb.				"	"	"
March		17.63		"	"	"
April				16.57	16.81	16.57
May				"	17.49	17.17
June				"	20.21	18.47
July			22.10	22.00	21.99	22.00
August				"	22.11	"
Sept.				"	28.74	"
Oct.			23.78	"	29.44	23.71
Nov.				"	31.40	"
Dec.				"	"	28.71
1980	—	—	—	n.a.	n.a.	
Jan.						30.37
Feb.						"
March						"
April						35.37
May						"
June						"
July						"
August						"
Sept.						"
Oct.						"
Nov.						"
Dec.						"

Column Notes:

1. *Irving:* For 1960 to the January to July 1971 price of $1.79, the figures shown under the Saint John column reflect the August 14, 1957 agreement with SOCAL in which the FOB component of the CIF price is the posted price. For August 1971 to 1975, annual (asterisked) and monthly 100 per cent and 50 per cent offshore prices are calculated by deducting the net income (or half of the net income) per barrel per year earned by the offshore subsidiary from the Canadian purchase prices. The offshore figures for 1976 to 1981 are incomplete as the net income figures for the offshore subsidiary were not provided by Irving Oil. See note to Table I and Appendix E for references and further details.

2. *Gulf:* The contract (see I-16E, No. 22) price for 1964 (at posted minus 12¢) is shown because Exhibit I-360, Tab 1, shows imports for that year. The 1967 to 1974 prices were standardized to 34° using the 2¢ per API formula to 1973 and 1.5¢ for 1974. The monthly prices shown for 1971 and 1972 are contract prices for Iranian Light 34° from the International Sector documents filed by the Director (see Book 6, tab 240, p. 78768). The July 1974 figure is for June; the prices shown in November and December 1974 apply to both months.

3. *Sun:* The average annual prices for 1973 and 1974 are from I-161 and were standardized to 34° using $0.0015 per 0.1° API variation. For February to August 1974, the asterisked figures are third-party purchase prices paid by the Sun Group to non-integrated petroleum companies as reported in Exhibit I-383. The May 1973 and November and December 1974 company prices are contract prices from I-315B, tabs 3 to 5. Contract prices from the same source are also shown for 1975 to 1978. In 1975 these included the asterisked figures plus the PCB prices shown. In 1976, the contract prices were $11.50 (February), $11.55 and $11.62 (March), $11.64 (May) and $11.65 (June). From June 1978 onwards the contract prices shown include a 2¢ per barrel agency or handling fee paid to Sun International.

4. *Texaco:* Although estimates of (a) 1958, 1959, 1962 and 1966 to 1969 prices can be derived by subtracting the AFRA freight rate from Ras Tanura to Portland reported by Texaco from the Table 4 CIF price at Portland and (b) 1970 to 1975 prices can be derived using the AFRA rates for voyages from Iran to Portland, these are not shown because the use of AFRA rates produces FOB prices that are biased low. Imports for 1976 to 1978 were reported by Texaco on I-158 but no PCB price data were available for these years.

TABLE F-3 (cont'd)

Notes to Table F-3 on Comparative FOB Costs of Imported Iranian Light (34.0 — 34.9° API) Crude Oil, 1958 to 1980 (cont'd)

Column Notes:

5. ***BP:*** For 1960 to 1968, the actual FOB prices paid by BP Canada to BP Trading were not available. The prices shown were obtained from the records of BP Trading (see I-290), which were stated to represent price offers to all customers including BP Canada. In this event, the prices shown for BP Canada prior to 1969 would represent another set of third-party prices as well as prices to BP Canada. The FOB prices taken from I-290 for 1960 and 1966 match those calculated using the CIF contract prices in effect for those years (see I-289, tab 1 and tab 2) minus the freight rates on I-290 which were reported to be the actual transportation costs of BP Canada. The figure shown for February 1974 is for January 10th.

6. ***Petrofina:*** The asterisked figures shown for 1960 and 1970 to 1975 are Canadian purchase or import prices which have been reduced by the Pannac (i.e., offshore subsidiary) dividend per barrel. No API standardization was required because the imports of crude oil were within the margins for API variations (33.0 to 34.9°) allowed for in the contracts for 1970 to 1974.

7. ***Murphy:*** Two sets of prices are shown. The estimated offshore prices for 1970 are derived by deducting from the Canadian import price, the Tepwin (i.e., offshore subsidiary) net income/barrel and the freight rate of $0.574 reported in exhibits filed in the Tax Reassessment case involving Murphy Oil Quebec (Spur Oil Ltd). See the Appendix E section on the Murphy Oil Group for the references cited. For 1971 to 1972, the net offshore prices were estimated by deducting from the Canadian purchase or import prices the Tepwin net income/barrel and the fixed freight rate of $0.812 for 1971 (with $1.249 for June, July and August 1, 1971) and $0.812 for 1972. Freight rate data were not available to calculate net offshore prices for December 1973 and January 1974. However for February and March 1974, the freight rates ($2.04 and $2.45) reported by the PCB were used to calculate estimates of the offshore prices for these months. The BP Contract prices for 1965 to 1970 are found in Tab 7 of Exhibit I-289 and Tab 22 of Book II of Spur Oil Ltd. v. The Queen, 81 DTC 5168. For January 1971 to April 1973, the negotiated June 4, 1970 market price of $1.246 found in Exhibit I-375A was adjusted for increases in Host Government Take (HGT) for Zakum 40° (from Abu Dhabi) as per the price adjustment clause in the BP contract. The changes in HGT were found in Tab 191 of Book III of op.cit., Spur Oil v. The Queen for 1971 to 1972. For 1973, the changes found in ICOPP for Murban 39° (also from Abu Dhabi) were used. For December 1973 and 1974, no evidence was available on the terms of the contract price renegotiated between BP and the Murphy Oil Group. The Esso International contract prices for August 1969 to May 1970 were found in Tab 191 of Book III (op.cit. Spur Oil v. The Queen). These were extended to the end of 1970 by adding on the November increase in Host Government Take (i.e., $0.086) for Iranian Light. The February and March 1974 prices reported by the PCB were reduced by the Tepwin net income per barrel figure and therefore also represent estimates of offshore prices for these months. For 1976 and 1977, the FOB prices reported to the PCB and the prices reported in the Marc Rich contracts are both shown (see I-126 and I-375A, item 6). See Appendix E for more details. Any comparison of offshore and contract prices must note that changes in contract prices would take a few months before appearing in the offshore prices of imports unloaded at Portland. That is, the offshore prices shown for imports into Canada represent purchases of crude oil loaded in the Middle East several months before. It was also determined that a markup of 12¢ per barrel was put on the price of the Iranian Light (from Esso International) which the Murphy Oil Group sold to Tepwin (the offshore subsidiary). This accounts for the difference noted for 1970 between the contract and offshore prices.

8. ***Newfoundland Refining Company.*** The prices shown from 1970 to 1973 are based on the contract with B.P. Trading which established a base market price of $1.275 for April 1970 which would escalate with increases in the tax paid cost plus 0.5¢ every July 1st, beginning on July 1, 1971. The Newfoundland Refining Company was in operation from 1973 to 1976 but prices are not shown for 1974 to 1976 because it was not possible to determine the effect of partial nationalization on the price adjustment clause in the BP contract.

9. ***Term Third-Party Price Range:*** For 1958 to 1970, the minimum and maximum values are based on prices reported by Adelman, Newton and Blair (see note to Table 1 for references). The Adelman price data for 1960 to 1967 had been standardized to 31.0° API using 1.5¢ per API degree. The prices used for this table were obtained by reversing the procedure used by Adelman, that is, by adding 4.5¢ per barrel. Corrections to Adelman's data were also made for rounding errors when discounts off posted prices were identifiable; the lowest price reported in 1960 was not used (see explanation in Adelman, The World Petroleum Market, pp. 385 to 386). The *asterisked* figures for 1970 are the market prices which BP negotiated with Murphy and the Newfoundland Refining Company. (See Appendix E for further details).

10. ***Spot Third-Party:*** The prices for 1960 to 1967 and the lower price in 1968 are those reported by BP in Exhibit I-290. The highest price in 1968 and the 1969 to 1970 prices were found in Adelman, W.P.M., pp. 417 to 421.

11. ***Tax Paid Cost:*** This refers to the cost of equity crude oil. It covered costs of production plus host government taxes and royalties, but excludes any rate of return on the producing company's investment capital.

12. ***Posted:*** Until early 1965, Iranian light was posted ex Bandar Mashur. In November 1965, the posting was changed to Kharg Island.

13. ***DOE Third-Party Rep.:*** Representative price was defined by the United States DOE as being the lowest price at which 50 per cent or more (by volume) of third-party transactions took place per month. That is, the weighted median price. These figures were taken from I-83 and the U.S. Federal Register sources cited in Appendix E. For October 1973 to September 1974, the figures shown represent estimates based on the maximum prices reported by the DOE from which 10¢ was deducted. The maximum prices were defined to be the highest of (a) the lowest price plus 10¢ per barrel, at which 50 per cent more (by volume) of third-party transactions took place per month or (b) the lowest price at which 65 per cent (by volume) or more of third-party transactions took place.

14. ***Acquisition Cost:*** These figures are from International Crude Oil and Product Prices (ICOPP) (see Exhibit I-80) and reflect any discounts from OGSP that are applicable to former concession-owning petroleum companies.

15. ***DOE Cost:*** These are taken from Exhibit I-80. According to the testimony of Brant/Davidson, the data were taken from term arm's length acquisition cost figures reported to the United States Department of Energy (DOE). Where more than one figure was available per month, Brant testified that the highest figure was chosen. Where more than one figure was reported per month by any company, only the latest or revised figure reported by that company was considered (see TS Vol. 71, p. 13348).

16. ***OGSP:*** These are prices applicable to sales between government and third-party buyers. For 1982, the prices shown in February to April are actually for February 5, 12, and 21.

17. ***Ultramar:*** For 1977 the price is for Sassan or offshore Iranian light crude oil.

TABLE F-4

Comparative Delivered Costs (CIF) of Iranian Light (34.0 – 34.9° API) Crude Oil, 1958 to 1980
(US $ per barrel, Portland, Unless Otherwise Specified)

DATE	IRVING	TEXACO	SHELL	IMPERIAL	GULF	BP	PETRO-FINA	MURPHY			Term Third-Party Price Range	Spot Third-Party Price Range
	Saint John							Estimated Offshore	BP Trading CIF Contract	Esso or (BP) FOB Plus Freight		
1958	—	—	—	n.a.	n.a.	—	n.a.	—	—	—	2.70*	n.a.
1959	—		—	n.a.	n.a.		n.a.	—	—	—	2.46	n.a.
Jan.		3.00				n.a.						
May 1		2.76										
1960	2.661	2.68	—	n.a.	—	2.58*	2.494*	—	—	—	2.11 - 2.25	2.48
Aug.	2.58					2.48*						
1961	2.58		—	—	—	2.18*	—	—	—	—	2.11	2.26
Jan.		2.68										
Feb. 1		2.58										
1962	2.58	2.58	2.20	—	—	2.18*	—	—	—	—	2.04 – 2.09	2.28
			2.61*									
1963	2.58	—	2.20	—	2.72	2.11*	—	—	—	—	2.04 – 2.22	2.31 – 2.38
1964	2.58	—	—	2.24	2.70	2.11*	—	—	—	—	1.86 – 2.11	2.24
				(2.20)*								
1965	2.58	—	—	—	2.13	2.10*	—	—	2.02	—	1.84 - 2.24	2.14
	2.59											
1966	2.59	2.33	—	—	—	2.02*	—	—	2.03	—	1.63 – 2.19	[illegible]
1967	2.59	2.33	—	—	2.31	2.02*	—	—	2.03	—		2.59 - 2.78
Jan.											1.72 – 2.26	1.90
July											2.39 – 2.41	3.65
Dec. 1									2.01			
1968	2.59	2.33	—	—	2.07	2.02*	—	—	2.02	—	1.70 - 2.18	2.55 – 2.64
July										(1.923)		
1969	2.59	2.33	—	—	—	1.96	—			(1.923)	1.85 – 2.06	
Jan.									2.02			2.32 - 2.65
Feb.									2.02			
April										(1.913)		
May									—	(1.923)		
June									—	(1.903)		
July									—	(1.904)		
Aug.									—	1.862		
Sept.									—	1.862		
Nov. 2									—	1.874		
Nov. 20									—	1.862		

TABLE F-4 (cont'd)

DATE	IRVING	TEXACO	SHELL	IMPERIAL	GULF	BP	PETRO-FINA	IRVING Offshore		MURPHY					SUN
	Saint John							50%	100%	Estimated Offshore	BP Trading CIF Contract	Esso or (BP) FOB Plus Freight	Term Third-Party Price Range	Spot Third-Party Price Range	
1970	2.59	2.28*	—	—	—	1.96	1.98*	—	—		2.02	(1.923)	2.40 -2.54	3.66 – 3.68	—
Jan.												1.862	1.93*-2.20*	2.86	
April										1.969		1.862			
June										1.969		1.862			
July										1.969		1.862	2.58*-2.97*	4.26	
Sept.	2.59							2.31,2.025		1.969		1.862			
Nov. 14										1.969		1.949			

DATE	IRVING	GULF	TEXACO	BP	SUN	PETRO-FINA	IRVING Offshore		MURPHY		Term Third-Party	Spot Third-Party
	Saint John	Portland	Portland				50%	100%	Estimated Offshore	BP Trading CIF Contract		
1971	2.76*	2.50			n.a.	2.496*	2.56*	2.37*			n.a.	n.a.
Jan.	2.59	2.14	2.28*	2.39			—	—		2.145		
Feb. 15		2.43		2.67						2.418		
May									2.410			
June		2.49	3.03	2.74					2.409-.846	2.483-.924		
July									2.390-.827	2.483-.924		
Aug.	2.90						2.502	2.104	2.275-.712	2.483-.924		
									2.472	2.483		
Sept.									2.473			
Oct.									2.484			
Nov.									2.484			
1972	2.90*	Pt. Tupper 2.54			—	2.725*	2.58*	2.26*			n.a.	n.a.
Jan.		2.43	3.03	2.74					2.475	2.483		
Jan. 20		2.55	3.14							2.604		
Feb.				2.86					2.482			
June		2.57										
Oct.										2.620		

TABLE F-4 (cont'd)

	TEXACO				BP		SUN OIL		IRVING	GULF		PETROFINA		MURPHY			IRVING Offshore		
	Company																		
DATE	Portland	Halifax	St-Romuald	PCB	Company	PCB	Company	PCB	Saint John	Company	PCB	Company	PCB	Estimated Offshore	BP Trading Contract	PCB*	50%	100%	Term Third-Party
1973		—		—	3.90	—	3.86*		3.70*	—	—	3.132*	—			—	3.16*	2.63*	
Jan.					3.03									—	2.69				
Feb.																			
March																			
April					3.12				3.272					—	2.784		2.97	2.667	
May							3.17												
June					3.22														
July	4.09*				3.26														
August	4.159*				3.33														
Sept.	4.261*																		5.99
Oct. 1	4.588*																		
Oct. 16	6.185*				5.04														5.99
Nov.	6.227*				5.04									5.652	n.a.				5.94
Dec.	6.124*		6.734*		4.94														
1974							12.34*		10.44*	Pt. Tupper		9.275*			n.a.		9.78*	9.11*	
Jan.	12.679	12.60	13.509	13.37	10.61	11.53			—	11.42-.43*		10.90*	11.50	5.457		11.35			12.54
Feb.	"	"	"	"	11.10*	11.18	12.83	12.76	11.77		11.44	10.71*	11.31	11.366		11.74	11.107	10.44	13.60
March	"	"	"	"		11.65			12.04		11.42			11.768			11.38	10.71	12.59
April	12.02	11.96	12.05	11.88		11.56		13.43				10.70*	11.30				—	—	13.07
May	"	"	"	11.89		11.52			12.08		11.51						11.42	10.75	12.92
June	"	"	"	"					11.98	11.55-.56*	11.03						11.32	10.65	12.88
July	12.06	12.00	12.08	11.93	11.03			12.81	12.05	11.15-.16*							11.39	10.72	12.66
August	"	"	"					12.71	—		11.59	10.73*	11.33				—	—	12.43
Sept.	"	"	"	11.93					11.97			10.69*	11.29				11.31	10.64	12.26
Oct.	12.21	12.15	12.23	12.08	10.78*	10.58			—								—	—	12.47
Nov.	12.39	12.33	12.41	12.28		12.32	12.05	11.66	—	11.69-.70*	11.88						—	—	12.61
Dec.		"		12.27		12.28	12.06	12.64	—	12.16-.17*	11.96						—	—	12.68

TABLE F-4 (cont'd)

DATE	BP		IRVING	TEXACO			SHELL	GULF		SUN OIL		ULTRA-MAR	PETROFINA		IRVING Offshore		MURPHY		
				Company															
	Company	PCB	Saint John	Portland	St-Romuald	PCB	PCB	Company	PCB	Company	PCB	PCB	Company	PCB	50%	100%	Contract	PCB	Term Third-Party
1975								n.a.		n.a.							—	—	n.a.
Jan.	12.27	12.28	12.15	12.29	12.31				11.77				11.70*	12.01	11.91	11.68			
Feb.	12.29		12.06	"		12.17			11.81				11.62*	11.93	11.82	11.59			
March	12.31	12.29	12.10	"		12.18			11.85	11.60	11.50	13.25	11.63*	11.94	11.86	11.63			
April	12.29	12.14	—	12.31			11.94		"	11.85	11.85		11.62*	11.93	—	—			
May	12.30	"	—	"					11.63		11.80		11.65*	11.96	—	—			
June	12.31	12.16	12.12	"			11.94		11.85	11.60		12.85	11.53*	11.84	11.88	11.65			
July	12.31	12.31	—	12.32		12.20									—	—			
August	12.36	12.35	—	"		12.13									—	—			
Sept.	12.34		—	"											—	—			
Oct.	13.21	13.22	13.09	"									12.61*	12.92	12.85	12.62			
Nov.	13.21	"	13.05	"									12.58*	12.89	12.81	12.58			
Dec.	13.22	13.23	13.10	"							12.99		12.61*	12.92	12.86	12.63			
1976					n.a.	—		n.a.		n.a.		—	n.a.		n.a.				
Jan.	12.99	12.98	13.11	13.04*					12.43					12.94					12.61
Feb.	"	"	—						12.44		12.84			12.89					"
March	"	"	13.16						12.43		12.76			12.84					"
April	"	12.97	13.14																12.62
May	"	12.98	—						12.42		12.64			12.82					12.64
June	"	12.96	—				13.05		12.41		12.65						12.67	12.65	12.63
July	"		—																12.60
August	"		—								12.64							12.59	12.61
Sept.	"		13.08															12.65	"
Oct.	"		13.07																12.62
Nov.	"		—															12.68	12.67
Dec.	"		13.01																12.64

	IRVING	BP		SUN OIL		GULF	TEXACO	ULTRAMAR	PETROFINA	MURPHY				BP		PETROFINA
DATE	Saint John	Company	PCB	Company	PCB	PCB	PCB	PCB	PCB	Contract	PCB	Term Third-Party	DATE	Company	PCB	PCB
1977		—	n.a.			n.a.	—						1979			
Jan.	—	14.20*									13.94	14.11	Jan.	14.91		
Feb.	14.34	"				13.73			14.06		14.00	14.12	Feb.			
March	—	"			13.78						"	"	March		19.28	
April	14.34	"										"	April			
May	—	"						14.74*			13.99	14.13	May			
June	—	"			13.91						13.89	14.12	June			
July	—	"										14.10	July			23.90
August	—	"								14.01		"	August			
Sept.	—	"								"		14.09	Sept.			
Oct.	—	"								"	14.02	"	Oct.			25.11
Nov.	—	"								"	14.00	"	Nov.			
Dec.	—	"								"	14.05	"	Dec.			
1978			—			—	n.a.		—	—	—	n.a.	1980	—	—	—
Jan.	—	14.20*											Jan.			
Feb.	—												Feb.			
March	—												March			
April	14.23												April			
May	—							14.43					May			
June	14.23				13.58			14.60					June			
July	—												July			
August	14.25				13.55								August			
Sept.	14.25				13.61								Sept.			
Oct.	—	14.29*		13.735									Oct.			
Nov.	—												Nov.			
Dec.	—												Dec.			

Column Notes:

1. *Irving*: For 1960 to the January to July 1971 price of $2.59, the Saint John purchase or import CIF prices are based on the August 14, 1957 contract between Irving Refining Limited and SOCAL (Exhibit I-318A) in which the $2.712 price was to vary with changes in the posted FOB price of $1.91 as of July 1, 1956. For the August 1971, the April 1973, the annual (*asterisked*) prices for 1971 to 1974 and the monthly 1974 to 1978 prices, see Exhibits I-257, Tab 2, I-274, I-394, I-265, I-266, I-267 and I-268. For 1971 to 1975, 100 per cent and 50 per cent net offshore prices were derived by deducting the net income (or half the net income) per barrel of Bomag-Irvcal (i.e. the offshore subsidiary). The offshore price for September 1970 is based on a negotiated $2.025 market price found in a draft agreement between Irving Refining Limited and Chevron Oil Sales Company (SOCAL) which was reported to have never been signed (see Exhibit I-257, Tab 1). The $2.31 price is the mid-point between the $2.59 and $2.025 prices. The offshore figures for 1976 to 1978 are not available because net income figures for the offshore subsidiary were not provided by Irving Oil. See note to Table 3 and Appendix E for further details.

2. *Texaco*: The 1970 and January 1971 figures are 33° API prices of $2.26 which were adjusted to 34°API. No imports were made at the contract prices reported for January 1971 and 1973. For 1976 to 1978 imports were reported for Montreal in I-158 but no PCB data were reported.

3. *Shell*: The second price shown in 1962 represents a spot purchase.

4. *Imperial Oil*: For 1964, two prices are shown. The first is the sum of the FOB price plus the average freight rate on shipments of crude oil from the Middle East to Portland. The second price in parentheses uses the average freight rate of shipments from the Middle East to Dartmouth.

Notes to Table F-4 on Comparative Delivered Costs (CIF) of Iranian Light (34.0 — 34.9° API) Crude Oil, 1958 to 1980 (cont'd)

Column Notes:

5. *Gulf*: The 1972 and 1974 *asterisked* figures are for Point Tupper. For 1972, it was possible to derive a CIF price by calculating a transportation cost figure of 64.7¢ (which is similar to the 64.6¢ figure reported for Iranian Heavy in the Green Book, Vol. III, p. 134) by adding ocean loss and insurance estimates (based on I-361, tab 6, p. 65320) and the pollution levy of 2.28¢ effective February 1972 to an ocean freight figure of 60.7¢ found in the International Sector Documents filed by the Director at Book 9, Tab 282, p. 63047. For 1974, the figure reported in the Green Book for Iranian Heavy was used. The July 1974 figure is for June while the prices shown in November/December 1974 are for both of these months. The PCB figures for 1974 onwards are for shipments to both Portland and Point Tupper. For May 1982, the PCB data sheets show volumes imported but no prices.

6. *Sun Oil*: The 1973 and 1974 *asterisked* average annual figures are from I-16H; the company monthly 1973 and 1974 CIF prices use FOB prices in I-315B, tabs 3 to 5. The other set of 1974 monthly prices are from the PCB. Contract prices are also shown for 1975 to 1978. In October 1978, the price includes a 2¢ agency fee paid to Sun International.

7. *BP*: See note on Table 3. For 1974, the February price is actually for January 10 while the October price is an estimate using the previous month's freight rate. For 1977 and 1978 no imports were made at these contract prices.

8. *Petrofina*: The 1960 and 1970 to 1975 *asterisked* figures are Canadian purchase or import prices which have been reduced by the Pannac (i.e., offshore subsidiary) dividend per barrel.

9. *Murphy*: Three sets of prices are shown. For April 1970 to 1974, net offshore prices were estimated by subtracting from the Canadian purchase or import price the Tepwin (i.e., offshore subsidiary) net income per barrel. The BP CIF contract prices for 1965 to 1970 were taken from I-289, tabs 7 and 8, and Tab 22 of Book I of Exhibits in *Spur Oil Ltd. v. The Queen*, 81 DTC 5168. They were derived from CIF Montreal prices by deducting the pipeline fees shown in I-161. For 1971 to April 1973, the June 4, 1970 negotiated FOB price of $1.246 was adjusted for increases in Host Government Take of Zakum (see note to Table 3) and then combined with the fixed freight rate of $0.812 for 1971 to September 1972 and $0.824 for October 1972 to 1973 (i.e., to take into account the $0.016 increase in port dues effective October 1972). For both the offshore BP contract CIF prices in June to early August 1971, two sets of prices are shown but the higher price based on a freight rate of $1.249 was applicable because shipments for these months represented extra quantities to the original agreement of terms arrived at in mid 1970 between the two parties; these were to be shipped at a premium freight rate to take into account the increase in transportation rates that occurred in late 1970. Freight rate data and FOB price data were not available to calculate BP contract CIF prices for December 1973 and early 1974. Insurance at 1 per cent of the C&F price was then added. The third set of prices for July 1968 to 1970 are the sum of the Murphy Group's own transportation costs plus FOB prices from Esso International reported in *Spur Oil Ltd. v. The Queen* 81 DTC 5168 at Tab 22 of Book I and Tab 178 of Book II and the BP contract FOB prices plus one per cent of the C&F price for insurance. For 1974, the CIF Price reported to the PCB is shown. Offshore prices were also calculated for 1974 from the PCB prices by deducting the net income/barrel figure from Tepwin. For 1976/1977, the prices reported to the PCB and the prices found in the Marc Rich contracts are both shown (see I-126 and I-375A, item 6). For 1971, some transactions involving Murphy are shown under the Spot Third-Party Column. See note to Table 3 and Appendix E for more details.

10. *Term Third-Party Price Range*: The prices shown for 1958 to 1960, 1963 and 1966 to 1970 are the sum of the Term Third-Party FOB price range data in Table 3, estimates of transportation costs cited in Appendix E and one per cent of the delivered price for insurance. US DOE representative or median FOB prices were also combined with these transportation cost estimates and one per cent of the C&F price for insurance to generate CIF prices for 1973 to 1974 and 1976 to 1977.

11. *Spot Third-Party Price Range*: These are calculated using the Spot Third-Party FOB price data in Table 3 and the spot transportation costs cited in Appendix E. For insurance, one per cent of the C&F price was also added.

12. *Ultramar*: For 1977, the price shown is for imports of Sassan offshore Iranian light crude oil.

TABLE F-5

Comparative FOB Cost of Imported Lagomar[1]/Lagomedio[2] (31.0 to 32.9° API)[3] Crude Oils, 1958 to 1982
(U.S. $ per barrel, ex La Salina equivalent ports)[4]

DATE	SUN[2,1] 32°	TEXACO[2] 32°			IMPERIAL[2] 32°	GULF[1,2] 32°	SHELL[1] 32°	PETROFINA[2,1] 32°	ULTRAMAR[2,1]	SUN 32° Alternate Value	Third-Party Price Range 32°	Tax Paid Cost (31° API)	Posted 31° API Lagomar	Posted 32° Lagomedio
		Portland	Halifax	Average										
1958	n.a.	2.79[1]	—	2.79[1]	—	n.a.	—	n.a.	—	n.a.	2.00*	1.62	2.77	2.79
1959	n.a.	2.73	—	2.73	—	n.a.	—	n.a.	—	n.a.	n.a.	1.48	2.77 2.62	2.79 2.64
1960 Nov.	n.a.	2.44	—	2.44	— 2.14	n.a.	— —	2.44	—	n.a.	1.41-1.80*	1.39	2.52	2.64 2.54
1961	2.10	2.44	—	2.44	2.14	2.19[1]	—	1.70	—	n.a.	n.a.	1.43	2.52	2.54
1962 Jan. 1 Aug. 1	2.48 (2.24)	2.38 2.44 2.29	—	2.38 2.44 2.29	2.14	2.19[1] (2.09)[1]	2.11* 2.06*	1.81	—	1.60	1.60-2.34	1.47	2.52	2.54
1963	2.48 (2.24)	2.29	—	2.29	2.14	—	2.11 2.08*	1.83	n.a.	1.60	1.60-2.25	1.49	2.52	2.54
1964	2.28 (2.24)	2.23* (2.29)	—	2.23*	2.14 (1.75)*	—	2.11 2.08*	1.74 (1.79)[1]	n.a.	1.63	1.60-2.54	1.45	2.52	2.54
1965	2.28 (2.24)	2.19*	—	2.19*	2.14	—	2.11 2.08*	1.75	n.a.	1.63	1.60-2.18	1.45	2.52	2.54
1966	2.21	2.19	—	2.19	2.14	—	2.11 2.08*	1.68	1.53	1.63	1.58-2.18	1.45	2.52	2.54
1967 Jan. Sept.	2.24	2.19	2.19	2.19	—	—	2.11 2.08* 2.00	1.68	1.63 (1.55*)[1]	1.63	1.63-1.64	1.48	2.52	2.54
1968	2.24	2.19	2.19	2.19	—	1.89[2]	2.00	1.71	1.70 (1.55*)[1]	1.80	1.70-1.80	n.a.	2.52	2.54
1969	2.24 2.23[1]	2.19	2.19	2.19	—	—	2.00 2.00[2]	1.68	—	1.70	1.65-1.80	n.a.	2.52	2.54

TABLE F-5 (cont'd)

DATE	SUN[2,1] 32°	GULF[2,1] 32°	IMPERIAL[2] 32°	TEXACO[2] 32°	SHELL[1] 32°	ULTRAMAR[2]	MURPHY[1]	PETROFINA[2] 32°	SUN 32° Alter-nate Value	Third-Party Price Range 32°	Tax Paid Cost (31° API)	Posted	
												31° Lago-mar	32° Lago-medio
1970	2.23[1]	—		n.a.*	2.00	—	1.75* (1.63)	1.65[2]	1.70	1.70-2.04	1.663	2.52	2.54
Jan.			2.04										
April			1.94										
Sept.20			2.15										
1971		2.54[2]	—	n.a.*	2.21	—	—	1.68[2],1.79[1]			1.925	2.52	2.54
Jan. 1	2.24[2]	2.00[2]			2.00				1.70	1.70-2.04	1.676		
Feb. 1		2.22[2]											
Mar. 18	2.87[2]	2.54			2.00				2.87*	2.87*	1.990		
Apr. 1					2.33								
July 1					2.34								
Oct. 1					2.32								
Dec. 20		2.45[2]											
1972		2.66[2]	2.62	n.a.*	2.54	—	—	1.96[1]	n.a.	n.a.	2.192	2.52	2.54
Jan. 1	2.80[1]	2.69[2]			2.56						2.212		
Apr. 1		2.67[2]			2.54						2.194		
May		2.68[1]											
June		2.65[1]											
July 1		2.60[2]			2.53						2.180		
Oct. 1						2.59							
Dec.		2.56[1]											

	(32°) SUN OIL[1]		(32°) GULF[2]		(32°) TEXACO[1]		SHELL[1]			PETRO-FINA				
DATE	Company		Company		Company		Company 32°			Mar-Lago 32°	DOE Acq. Cost	Tax Paid Cost	Tax Paid Cost	Min. Tax Value
1973	3.76	—		—	n.a.*	—	Below 80,000 tons	Above 80,000 tons		5.89	32°API	31°API	32°API	31°API
Jan.	2.95						2.678	2.644			n.a.	2.305		3.249
Feb.							2.724	2.689			"			
Mar.			2.84				2.897	2.862			"	2.517		3.610
April							2.975	2.806			"	2.594		3.744
May											"			
June											"			
July 1			3.06				3.107	2.710			"	2.749		3.972
July 15							3.105	2.875			"			
August							3.363	3.133			"	3.007		4.410
Sept.	4.80		3.55				3.568	3.339			"	3.203		4.760
Oct. 1							3.840	3.440			"	3.493		5.203
Oct. 16											"			
Nov. 1							5.208	4.808			"	5.090	5.457	7.563
Nov. 22							5.457	5.057			"			
Dec.			5.55				5.574	5.174			"	5.206	5.70	7.762
							Sulphur Premiums and Bar Tolls							
1974	12.20	PCB		PCB	n.a.*	PCB	Out	In	PCB	—				
Jan.	13.40	13.41				11.14	9.195	9.30	9.28		9.84	9.259	9.79	14.356
Feb.		13.41	10.43	10.51		11.86	9.646	9.75	9.77		10.46	9.672	10.41	
March		13.41	"			11.43			9.71		"	"	"	
April		13.40	"			11.20			9.73		"	"	"	
May	12.80	12.74	"			11.29			9.73		"	"	"	
June	12.60	12.54	"	10.49		11.12			9.73		"	"	"	
July	12.00	11.94	10.82	10.82		11.07	9.967	10.11	10.04		10.80	10.01	10.79	14.906
August	11.50	11.50							10.07		"	"	"	
Sept.	11.25	—	10.79*			11.07	10.182	10.32	10.18		10.75	"	"	
Oct.	"	11.21	10.79*			11.38	10.335	10.47	10.45		11.42	"	"	
Nov.	"	11.25				11.08			10.48		"	"	"	
Dec.	11.20	11.14				11.05			10.50		"	"	11.72	

TABLE F-5 (cont'd)

	(32°) TEXACO[2]		SUN OIL[1,2]		SHELL					
			32° LAGOMAR		1	2				
DATE	Company	PCB	Company	PCB	PCB	PCB	DOE Acq. Cost	Tax Paid Cost	Tax Paid Cost	Min. Tax Value
1975	n.a.*					—	31°API	32°API	31°API	
Jan.		11.41	11.20	—	10.73		11.18	10.573	11.18	14.134
Feb.		11.41	11.10	11.05	10.84		11.18			"
March		11.35	11.10	11.05	10.75		11.17		11.08	
April		11.31	"	11.05	10.78		11.19			
May		11.31			10.76		11.17			
June		11.24			10.76		11.18			
July					10.79		"			
August		11.19			10.77		"			
Sept.		11.18			10.75			"		
Oct.		12.32			11.82		12.23	11.608		15.579
Nov.		12.31			11.83		"			
Dec.		12.31			11.80		"			
			LAGOMEDIO							LAGOMEDIO Min. Sales Price
1976	n.a.*		32°			—				32°API
Jan.					12.32		12.226	11.608		12.40
Feb.		12.41			12.24		"			
March		12.49			12.27		"			
April		12.45			12.34		12.49			
May		12.44			12.34		"			
June		12.42			12.29	12.36	"			
July		12.46			12.27		12.46			
August		12.44			12.26		"			
Sept.		12.49			12.24		"			
Oct.		12.50	12.58	12.65	12.26		12.53			12.45
Nov.		12.46			12.33		"			
Dec.		12.50		12.81	12.27	12.81	"			

	SUN OIL[1,2]		TEXACO[2]			SHELL[1]			
	LAGOMAR		32° Company					DOE Acq. Cost	Min. Sales Price
DATE	Company	PCB	Portland	Halifax	Avg.	PCB	PCB		
1977	—	—			n.a.				32°API
Jan.			13.64	13.64		13.67	13.58	13.70	13.64
Feb.			"	"		13.68	13.58	"	
March			"	"		13.48	13.57	"	
April			"	"		13.70	13.58	"	
May			"	"		13.70	13.57	"	
June			"	"		13.64	"	"	
July			"	"		13.71	"	13.72	
August			"	"		13.71	13.56	"	
Sept.			"	"		13.72	13.58	"	
Oct.			"	"		13.71	13.58	13.73	
Nov.			"	"		13.71	13.57	"	
Dec.			"	"		13.69	13.57	"	
	LAGOMEDIO								
1978	32°				n.a.				
Jan.			13.64	13.64		13.69	13.56	13.75	13.64
Feb.			"	"		"	13.57	"	
March			"	"		13.68	13.58	"	
April			"	"		"	13.57	13.72	
May			"	"		13.65	"	"	
June			"	"		13.66	13.56	"	
July			"	"		"	13.56	13.71	
August			"	"		13.69	"	"	
Sept.			"	"		13.65	13.57	"	
Oct.			"	"		"	13.56	"	
Nov.	14.25	14.26	"	"		"	"	"	
Dec.			"	"		13.66	13.57	"	

TABLE F-5 (cont'd)

	TEXACO[2]			SHELL[1]					TEXACO[2]	SHELL[1]			
	32° Company												
DATE	Portland	Halifax	Avg.	PCB	PCB	DOES Acq. Cost	Min. Sales Price	DATE	32° Company	PCB	PCB	DOE Acq. Cost	Min. Sales Price
1979			n.a.				32°API	1981	n.a.			n.a.	32°API
Jan.	14.32	14.32		14.34	14.24	14.40	14.32	Jan.		36.70	36.74	"	36.32
Feb.	"	"		14.36	"	14.38		Feb.		36.63	36.67	"	
March	"	"		14.33	"	14.44		March		36.85	36.68	"	
April	n.a.	16.81		16.81	16.73	16.86	16.81	April		36.44	36.70	"	
May	"	17.41		17.20	17.14	17.29	17.41*	May		36.74	36.74	"	
June	"	"		17.44	17.34	17.48		June			36.63	"	
July	21.32	21.32		21.34	21.00	21.28	21.32	July		36.81	36.69	"	
August	"	"		21.35	21.13	21.40		August		36.77	36.64	"	
Sept.	"	"		"	21.00	21.49		Sept.		36.81	36.67	"	
Oct.	"	"		21.34	21.06	21.30		Oct.		36.85	36.58	"	
Nov.	"	"		21.35	21.08	21.26		Nov.		35.81	35.30	"	35.32
Dec.	n.a.	25.22		25.23	22.68	22.72	25.22	Dec.		35.81	35.32	"	35.32
1980	n.a.	n.a.	n.a.			n.a.		1982	n.a.			n.a.	
Jan.				27.23	27.19		27.22	Jan.	"	35.83	35.28	"	35.32
Feb.				29.34	29.15		29.22*	Feb.	"	35.88	35.30	"	
March				"	29.24			March	"		35.23	"	
April				"	29.24			April	"	35.85		"	
May				31.07	29.59		32.72*	May	"		35.20	"	
June				33.23	32.53			June	n.a.	n.a.	n.a.	"	
July				33.80	33.12		33.32	July	"	"	"	"	35.32
August				33.71	33.18			August	"	"	"	"	
Sept.				33.74	33.17			Sept.	"	"	"	"	
Oct.				33.77	33.19			Oct.	"	"	"	"	
Nov.				33.53	33.21			Nov.	"	"	"	"	
Dec.				33.59	33.16			Dec.	"	"	"	"	

Notes to Table F-5 on Comparative FOB Costs of Imported Lagomar/Lagomedio (31.0 to 32.9° API) Crude Oils, 1958 to 1982

General Notes:

1. Companies with data for Lagomar crude oil are identified with the number 1 in the column headings or in the body of the table.
2. Companies with data for Lagomedio crude oil are similarly identified with the number 2.
3. The column headings provide details on the range of API levels of the crude oil imported by each company. The company price data for 1960 to 1972 have been standardized to 32.0°API using the 2¢ per degree API adjustment formula. No API information was available for Ultramar.
4. The FOB prices reported for Imperial, Texaco, Gulf and Sun, as well as the posted prices are for ports equivalent to La Salina (i.e. Puerto Miranda for Sun's Lagomar and Punta de Palmas for Imperial, Gulf, Texaco, Petrofina, Murphy and Sun's Lagomedio). The FOB prices reported by Shell were ex Cardon. Since this port is near Amuay, these prices were reduced by 3¢ for making FOB comparisons. No information was available on the loading ports used by Ultramar, but the prices shown assume these are for La Salina equivalent ports.

Column Notes:

1. *Sun:* The 31° to 33° prices reported by Sun were converted to 32°. The prices shown for 1961 to 1965 come from Exhibit I-197 pertaining to the Department of National Revenue's tax reassessment for the early 1960's. The 1966 to 1969 prices are based in I-187, I-161 and I-315B, tab 3. The 1970 to 1974 prices are based on I-161, I-187, I-200, tab 1 and I-349. The company monthly prices for 1973 to 1978 are contract prices while the average annual prices come from I-161 and data provided by Sun Oil. In S-41, Table I, Sun Oil noted that the prices shown for 1962 to 1965 were reduced to $2.24 because Income Tax Reassessments forced its supplier to make a refund. The $2.24 price is shown in parentheses.
2. *Texaco:* The 1961 to 1968 figures are based on 31° prices. The 1958 price is for Lagomar and was therefore reduced by 3¢ to make it equivalent to an ex La Salina price. The 1959 price was obtained by subtracting reported pipeline fees (11.1¢) and freight costs (30¢) from the CIF Montreal price of $3.12 (see I-161 and I-16G). In 1964, Texaco Canada requested and received a reduction of 7.5¢ per barrel on its volume of imports of Lagomedio to Montreal exceeding 2.7 million barrels. This reduction was to compensate it for the cost penalties incurred when extra volumes of Lagomedio and Lama were used to replace the Arabian Light crude oil which the Montreal refinery was specifically designed to process. The price shown for 1964 reflects an average reduction of 6¢ across the total volume of Lagomedio imported by the Montreal refinery. The price in parentheses was the Montreal contract price for that year. The Halifax contract price in 1964 remained at $2.29 (32°), but no imports were reported in that year. For 1965 no imports were reported for the contract price shown. For 1970 to 1976, Texaco provided ocean loss and AFRA freight rate data to enable FOB prices to be derived from the Lagomedio CIF prices shown on Table 6. These are not shown because the use of AFRA freight rates produces FOB prices that are biased low. For 1974 to 1982, PCB prices are shown along with some FOB prices reported by Texaco for 1977 to 1979 (see I-158).
3. *Imperial Oil:* The 1960 to 1966 figures were converted to 32° API using Exhibit I-51C, tab VI-32 and I-49, p. IX-14. The 1960 price is also based on a price reported in a contract between Imperial and the Sohio Petroleum Company for shipments starting in November of that year (in the International Sector C Document # C-14). The 1964 figure in parentheses represents a spot purchase. The 1970 to 1972 figures are the prices paid by the offshore subsidiary as reported in I-51C, tab 40, p. 113799.
4. *Gulf:* The 32° 1961 and 1962 figures are based on 27° contract prices for MarLago ex San Lorenzo an equivalent La Salina port (see I-380, tabs 5 and 6); the second 1961 figure in parentheses was converted from a 31° price of $2.09 reported in I-353. The 1968 to 1974 prices for Lagomedio 32° were converted from average annual prices in I-16E and monthly contract prices (see I-380, tabs 19, 21, 24, 30, 32, 33, 39, 40 and 46 and International Sector Documents Book 8, tab 240, p. 78774) as well as monthly import prices reported in I-16E. In 1972, monthly import prices for MarLago are also shown. The PCB prices in 1974 were also standardized to 32°.
5. *Shell:* The 1962 to 1971 figures are based on 31° Lagomar prices FOB ex Cardon. The original prices reported by Shell were reduced by 3¢ to make them equivalent to FOB La Salina prices but they were also raised 2¢ for the API adjustment; the net price adjustment involved a 1¢ reduction. The 1972 price being already 32° was reduced by 3¢. No adjustment for API variation or port of exit was assumed to be required for the Lagomedio 32° price shown for 1969 because that crude oil was typically loaded at fresh water ports equivalent to La Salina. The 1962 figures are for April 24 and 30th and are based on spot and contract prices for a Lagomar/Bachaquero blend (at 30° API) of $2.07 and $2.02, respectively. The *asterisked* figures for 1963 to 1967 represent price reductions available for imports exceeding 50,000 barrels per day. The second 1969 price is for Lagomedio. For 1973 two sets of figures are shown for shipments in vessels below and above 80,000 tons.The first column of 1974 prices are those reported by Shell (Exhibit I-16), excluding sulphur premiums of approximately 10¢ for Lagomar effective January 1 and bar tolls of 3.8¢ for Puerto Miranda effective June 12. The second column of prices for 1974 includes these premiums as suggested by Shell in I-16, note 15. The third column are the prices reported by the PCB.
6. *Murphy:* The 1970 *asterisked* price is from *Spur Oil Ltd. v. the Queen*, 81 DTC 5168 at Tab 178 of Book III. The second 1970 price in parentheses represents the above price minus the 12¢ markup which was observed for Iranian light prices in early 1970 between Murphy Oil Trading Company and Tepwin, the offshore subsidiary.
7. *Petrofina:* The figures shown for 1960 to 1971 and 1973 are Canadian purchase or import prices which have been reduced by the Pannac (i.e., offshore subsidiary) dividend per year. The second 1971 price and the 1972 and 1973 prices are based on MarLago crude oil at 26.7° and 26.8° API converted to 32°.
8. *Ultramar:* The 1966 to 1968 and 1972 prices are net of the offshore subsidiary FOB markup but not of any markup that may have been placed on transportation services. The 1967 and 1968 figures in parentheses are for MarLago. If these prices are of 26° API Gravity, the 32° prices would be $1.67.
9. *Sun Alternate Value:* These are estimates of FOB market prices which Sun Oil Canada developed based on information concerning the prices which its parent organization could obtain on its third-party sales of Lagomedio crude oil into Europe and South America as well as market prices for Lagomar which it purchased from the Shell Oil Group. The figures shown are from I-188 which was dated May 10, 1971. Margin notes on this exhibit indicate that the Venezuelan crude oil (i.e., Lagomedio and Lagomar) column of prices was for 32° API for 1962 to 1970. The price for 1971 on I-188 was the tax reference price for 31° Lagomar crude oil (see I-315B, tab 3 for its mention as the contract price effective January 1, 1972). It was converted to 32° by the addition of 2¢ per barrel.

Notes to Table F-5 on Comparative FOB Costs of Imported Lagomar/Lagomedio (31.0 to 32.9° API) Crude Oils, 1958 to 1982 (cont'd)

Column Notes:

10. ***Third-Party Price Range:*** Aside from the 1962 to 1971 alternate value prices in I-188, previous references to arm's length or market prices by Sun Oil Group officials were found in I-16B, tab 5 for 1966; I-205, p. 83116 for 1966 and 1967; I-189 and I-16B, tab 3 for 1968; I-198 and I-201, p. 83914 for 1969; and I-16A, tab 5 for 1968 to 1971. A 1962 to 1966 list of prices for the Sun Oil Group's sales of Lagomedio to third-party buyers was also available from I-194, I-196 and I-16B, tab 5. The prices found in I-188 and the sources listed above were used to develop the price range figures shown. In 1964, the maximum price comes from a series of Lagomedio third-party prices paid to Esso International by non-integrated buyers in 1964 and 1965 provided in I-50A. (The 1964 and 1965 Esso International sales prices were $2.12 to $2.54 and $2.12, respectively.) The highest Sun Group price in 1964 was $2.23. The minimum prices for 1964 to 1966 were obtained by deducting a 60¢ per barrel freight rebate from the prices reported in I-196 for sales to Wesseling, a refiner in Germany, as per information in I-194. (Prices to Petrobras in Brazil were reduced by a freight rebate of 37¢. The resulting reduced prices were almost identical to 32° prices derived from the 35° prices of Petrobras purchases of Venezuelan crude oil from the Shell and Sun Groups and Atlantic Richfield Co. in 1964 to 1966 which were reported in Exhibit I-51A, tab II-5, p. 76, which gives the evidence of Blair before the U.S. Senate. The March 18, 1971 price, as mentioned in Note 19, was derived from a 31° price by adding 2¢. The 1970 data were used for 1971 prior to March 18. The prices taken from I-196 were limited to sales to non-integrated buyers and also excluded any prices reported for sales to the U.S. or to Puerto Rico. (If sales to Commonwealth in Puerto Rico were included, the maximum prices in 1963, 1964 and 1966 would increase to $2.39, $2.37 and $2.37, respectively.) Some third-party prices for sales to buyers inside Venezuela were also given in I-194. For example, a price of $1.40 to a non-integrated buyer (Space Petroleum) was cited for late 1965 or early 1966. The lowest inside Venezuelan sales price was reported to be $1.13 (versus a production cost of about $1.00), but the identity of the buyer and the year of the sale were not indicated. Inside buyers who purchased for resale outside Venezuela were required to get the approval of the Venezuelan government for their outside selling price. Although no information was available on the prices required by the government, 10 per cent off the posted price for Tia Juana Light was suggested as the highest price required because that crude oil was reported to be close to Lagomedio in character. Sun Oil in its Argument (S-41, p. 18) also cited a discount of 75¢ in 1962 to Petrobras of Brazil which was reported in I-192. Adelman in *The World Petroleum Market*, (p. 388) provided FOB prices of Lake Maracaibo crude oil for $2.00 and $1.80 for sales to Brazil in late 1958 and the second half of 1960, respectively. For 1974, Sun provided the Commission (see I-383) with third-party sales prices for Lagomedio of $12.48 (June) and $12.80 (July). Since it was not possible to determine whether these transactions involved integrated or non-integrated buyers, these figures were not shown in the table.

11. ***Tax Paid Cost:*** The data for 31°API between 1958 and 1967 are average company costs in I-16, Table VIII for T.J. light 31° API. Sun Oil (TS Vol. 39, pp. 8271-72 and I-16B, tab 5) indicated that its tax paid costs for Lagomedio were higher (i.e., $1.58 as shown in I-16B, tab 5) because its royalty rate was 21 per cent (versus 16.6 per cent for other petroleum companies). No data were available for 1968 and 1969. For 1970 to 1976, the 31° tax paid cost figures shown are based on I-107 which includes freight premiums, but excludes any applicable sulphur premiums. The 1973 to 1975 data for 32° API are from the acquisition cost information sheets which Sun Oil filed with the United States Department of Energy (see I-85, I-226 and I-348).

12. ***Posted:*** The data for Lagomar 31.0°API are derived by converting the posted prices for Shell's Lagomar ex Cardon (near Amuay) to an equivalent ex La Salina price by subtracting 3¢ per barrel. The data for Lagomedio 32.0°API are obtained by converting the posted prices for T.J. light 31° La Salina to 32° by adding 2¢ per barrel. See I-187, I-51C, tab VI-35, Director's Green Book, Vol. III, p. 152, I-51D, tab IX-2, and International Crude Oil and Product Prices (ICOPP).

13. ***DOE Acquisition Cost:*** These figures are from the Brant/Davidson Exhibit I-80. The data are term third-party acquisition cost figures reported to the U.S. Department of Energy (DOE). Where more than one figure was reported per month, Brant testified that the highest figure was chosen. However, if several figures were reported from the same company in any single month, then only the latest or revised figure reported by that company was considered (TS Vol. 71, p. 13348).

14. ***Minimum Export Tax Value:*** These are tax reference prices set by the Venezuelan government. They include the applicable freight and sulphur premiums for 31.0°API crude oil from 1973 to 1975.

15. ***Minimum Sales Prices:*** The figures for 1976 to 1982 are equivalent to official government selling prices for 32.0°API Lagomedio crude oil. The *asterisked* prices shown in 1979 and 1980 were effective May 16, 1979 and February 9 and May 26, 1980.

16. ***Irving Oil:*** Imports were reported in I-259 for 1968 to 1971, but no information was available on the prices being paid. Imports of Lagomedio may also have occurred prior to 1968.

17. ***BP:*** Some imports of Lagomar were reported in I-289, tab 4 for 1963 but no price data were available.

TABLE F-6

Comparative Delivered (CIF) Costs of Imported Lagomar[1]/Lagomedio[2] (31.0 — 32.9° API)[3] Crude Oils, 1958 to 1982
(US $ per barrel, Portland, Unless Otherwise Specified)[4]

DATE	SUN[2,1] 32°	TEXACO[2] (32°)			IMPERIAL[2] (32°)			SHELL[1] 32°	GULF[1,2] 32°	IRVING[2] Saint John	MURPHY[2]	PETRO-FINA[2,1] 32°	ULTRA-MAR[2,1] Holyrood	Sun 32° Alternate Value	Third-Party Price Range
		Portland	Halifax	Average	Portland	Dartmouth	Average								
1958	n.a.	3.08[1]	—	3.08[1]	—	—	—	—	n.a.	—	—	n.a.	—	n.a.	n.a.
1959	n.a.	3.01	—	3.01	—	—	—	—	n.a.	—	—	n.a.	—	n.a.	"
1960	n.a.	2.78	—	2.78	2.39*	2.35*	2.37*	—	n.a.	n.a.	—	2.74	—	n.a.	1.61-2.00
1961	n.a.	2.74	—	2.74	2.39	2.35	2.36	—	n.a.	n.a.	—	2.06	—	n.a.	n.a.
1962	2.63*	2.71	—	2.71	2.37	2.34	2.36	2.39,*	n.a	n.a.	—	2.17	—	1.79	1.79-2.54
Jan. 1	(2.39)	2.77		2.77				2.34*							
Aug. 1		2.62		2.62											
1963	2.60 (2.36)	2.64*	—	2.64*	2.38	2.36	2.37	2.39 2.36*	—	n.a.	—	2.20	n.a.	1.79-1.81	1.79-2.47
1964	2.42 (2.38)	2.46	—	2.46	2.35	2.35	2.35 (1.96)*	2.36 2.33*	—	n.a.	—	2.11 (2.16[1])	n.a.	1.80-1.85	1.77-2.76
1965	2.45 (2.41)	2.45*	—	2.45*	—	2.35	2.35	2.37 2.34*	—	n.a.	—	2.11	n.a.	1.80-1.84	1.77-2.39
1966	2.39	2.40	—	2.40	—	2.38	2.38	2.36 2.33*	—	n.a.	—	2.05	n.a	1.80-1.84	1.75-2.39
1967	2.53	2.39	2.40	2.39	—	—	—		—	n.a.	—	2.00	n.a.		
Jan.								2.33,						1.79-1.84	1.79-1.85
July								2.30*						1.83-1.87	1.83-1.88
Sept.								2.22							
1968	2.53	2.39	2.40	2.39	—	—	—	2.22	2.04[2]	n.a.	2.03*	2.03	1.90 (1.82)	1.93-2.02	1.83-2.02
1969	2.55 2.54[1]	2.39	2.43	2.40	—	—	—	2.21 2.26[2]	—	n.a.	—	1.99	—	1.85-1.91	1.80-2.01
1970		2.23	2.23	2.23				2.20	—	n.a.	1.99	1.96	—	1.95-2.00	1.95-2.34
Jan.	2.55[1]				2.27	2.28	2.27				(1.87)			1.92-1.95	1.92-2.29
Feb.					2.17	2.18	2.17								
March					2.38	2.39	2.38								
July														2.00-2.08	2.00-2.42

TABLE F-6 (cont'd)

DATE	SUN[2,1] 32°	TEXACO[2] (32°)			IMPERIAL[2] (32°)			GULF[1,2] 32°	SHELL[1] 32°	IRVING[2]	PETRO-FINA[1,2] 32°	ULTRA-MAR[2] Holyrood	SUN 32° Alternate Value	Third-Party Price Range
		Portland	Halifax	Average	Portland	Dartmouth	Average							
1971		n.a.	n.a.	n.a.	—	—	—	2.71[2]	2.50	n.a.	2.40,[2](2.12)[1]	—		
Jan. 1	2.55[1]	2.46	2.46	2.46				2.17[2]	2.24				1.95-2.05	1.95-2.39
Feb.1								2.39[2]						
Mar.18	3.20[1]	2.77	2.77	2.77				2.71[2]	2.24				3.14-3.23	3.14-3.23
Apr.1		2.76	2.76	2.76					2.57					
July 1		2.76	2.76	2.76					2.58				3.23	3.23
Oct. 1		2.76	2.76	2.76					2.56					
Dec.20								2.62[2]						
1972		n.a.	n.a.	n.a.	2.92	2.92	2.92	2.84		—	2.34[1]	n.a.	n.a.	n.a.
Jan. 1	3.13[1]	3.01	3.01	3.01				2.86[2]	2.80					
April 1		3.01	3.01	3.01				2.85[2]	2.78					
May								2.86[1]						
June								2.83[1]						
July 1		2.90	2.90	2.90				2.77[2]	2.77					
Dec.								2.73[1]						

TABLE F-6 (cont'd)

	SUN OIL[1]		TEXACO[2]				GULF[2] (32°)		SHELL[1] (32°)			PETRO-FINA
			32° Company									
DATE	32° Company		Portland	Halifax	St-Romuald		Company		Company			Mar-Lago 32°
1973	4.13								Below 80,000 tons	Above 80,000 tons		6.60
Jan.	3.32		3.02	3.02	n.a.				2.93	2.89		
Feb.			3.06	3.06	"				2.97	2.94		
March			3.23	3.23	"		3.10		3.15	3.11		
April			3.31	3.31	"				3.23	3.06		
May			"	"	"							
June			"	"	"				3.36*	2.96*		
July			4.39	4.40	"		3.32		3.36*	3.13*		
August			4.65	4.66	"				3.61	3.38		
Sept.	5.17		4.85	4.86	"		3.81		3.82	3.59		
Oct. 1			5.52	5.53	"				4.09	3.69		
Oct.16			"	"	"				5.46*	5.06*		
Nov.			6.89	"	7.17				5.71*	5.31*		
Dec.			7.01	7.02	7.29		5.81		5.82	5.42		
									Sulphur Premiums and Bar Tolls			
1974	12.64	PCB				PCB		PCB	Out	In	PCB	—
Jan.	13.84	13.73	11.33	11.33	11.71	11.64			9.59	9.69	9.58	
Feb.		"	11.74, 11.96*	11.74, 11.96*	12.12, 12.34*	12.52	11.01	11.11	10.04	10.14	10.11	
March		"	11.74, 11.96*	11.74, 11.96*	12.12, 12.34*	11.98	"				10.08	
April		12.49	11.43	11.44	11.54	11.69	"				10.21	
May	13.24	13.05	"	"	"	11.75	"				10.13	
June	13.04	12.84	"	"	"	11.59	"	11.07			10.12	
July	12.44	12.24	11.49	11.50	11.60	11.51	11.36	11.37	10.36	10.50	10.40	
August	11.94	11.80	"	"	"						10.40	
Sept.	11.69		"	"	"	11.49	11.34*		10.57	10.71	10.53	
Oct.	"	11.55	11.48	11.49	11.59	11.99	11.39*		10.73	10.87	10.82	
Nov.	"	11.56	"	"	"	11.48					10.91	
Dec.	11.64	11.45	"	"	"	11.43					10.99	

TABLE F-6 (cont'd)

	SUN OIL[1,2]		TEXACO[2]			SHELL		
	LAGOMAR		Company					
DATE	Company	PCB	Portland	Halifax	St-Romuald	PCB	1 PCB	2 PCB
1975	32°				n.a.			
Jan.	n.a.		11.82	11.83		11.79	11.22	
Feb.	n.a.	11.47	"	"		11.76	11.41	
March	n.a.	"	"	"		11.71	11.30	
April	n.a.	"	11.70	11.70		11.68	11.19	
May			"	"		11.67	11.15	
June			"	"		11.58	11.26	
July			11.61	11.61			11.21	
August			"	"		11.61	11.12	
Sept.			"	"		11.57	11.18	
Oct.			12.75	12.75		12.74	12.21	
Nov.			"			12.67	12.22	
Dec.			"			12.72	12.18	
	LAGOMEDIO							
1976	32°				n.a.			
Jan.			12.77	12.78			12.72	
Feb.			"	"		12.78	12.65	
March			"	"		12.87	12.66	
April			"	"		12.88	12.80	
May			"	"		12.85	12.78	
June			"	"		12.81	12.64	12.75
July			12.76	12.77		12.82	12.79	
August			"	"		12.80	12.92	
Sept.			"	"		12.86	12.54	
Oct.	n.a.	13.10	12.82	12.83		12.87	12.86	
Nov.			"			12.83	12.83	
Dec.		13.28	"			12.88	12.77	12.80

TABLE F-6 (cont'd)

	SUN OIL[1,2]		TEXACO[2]		SHELL[1]			TEXACO[2]		SHELL[1]			TEXACO[2]		SHELL[1]	
	LAGOMAR		Company					Company					Company			
DATE	Company	PCB	Portland	Halifax	PCB	PCB	DATE	Portland	Halifax	PCB	PCB	DATE	Portland	Halifax	PCB	PCB
1977	—	—					1979					1981	n.a.	n.a.		
Jan.			14.03	14.16	14.10	14.06	Jan.	14.97	15.23	15.12	14.81	Jan.			37.96	37.89
Feb.			"	"	14.19	13.94	Feb.	"	"	15.27	14.88	Feb.			37.55	37.91
March			"	"	13.91	13.97	March	"	"	15.03	14.89	March			37.62	37.87
April			"	"	14.18	13.97	April	n.a.	17.72	17.93	17.46	April			37.74	37.87
May			"	"	14.22	13.96	May	"	18.32	18.19	17.92	May			37.51	37.87
June			"	"	14.09	14.02	June	"	"	18.11	18.11	June				37.75
July			"	"	14.15	13.96	July	21.97	22.23	22.39	21.72	July			37.73	37.76
August			"	"	14.15	13.96	August	"	"	22.39	21.89	August			37.48	37.85
Sept.			"	"	14.17	13.97	Sept.	"	"	22.41	21.75	Sept.			37.44	37.87
Oct.			"	"	14.13	13.97	Oct.	"	"	22.08	21.81	Oct.			37.59	37.78
Nov.			"	"	14.14	13.96	Nov.	"	"	22.13	21.90	Nov.			36.57	36.39
Dec.			"	"	14.02	13.91	Dec.	n.a.				Dec.			36.48	36.36
1978	LAGOMEDIO 32°						1980	n.a.	n.a.			1982	n.a.	n.a.		
Jan.			14.03	14.13	14.12	13.99	Jan.			28.66	28.15	Jan.			36.59	36.13
Feb.			"	"	14.08	13.95	Feb.			30.29	30.16	Feb.			36.54	36.13
March			"	"	14.25	14.01	March			30.65	30.21	March				36.05
April			"	"	14.21	13.96	April			30.09	30.16	April			36.66	
May			"	"	14.10	13.94	May			32.21	30.74	May				35.93
June			"	"	14.08	13.93	June			33.91	33.49	June			n.a.	n.a.
July			"	"	14.08	14.10	July			34.48	34.38	July			"	"
August			"	"	14.14	14.07	August			34.38	34.36	August			"	"
Sept.			"	"	14.04	14.07	Sept.			34.44	34.26	Sept.			"	"
Oct.			"	"	14.07	14.10	Oct.			34.42	34.34	Oct.			"	"
Nov.	n.a.	15.45	"	"	14.06	14.07	Nov.			34.70	34.41	Nov.			"	"
Dec.			"	"	14.20	14.07	Dec.			34.42	34.37	Dec.			"	"

Notes to Table F-6 on Comparative Delivered (CIF) Costs of Imported Lagomar/Lagomedio (31.0 — 32.9° API) Crude Oils, 1958 to 1982

General Notes:

1. Companies with data for Lagomar crude oil are identified with the number 1 in the *column* headings or in the body of the table.
2. Companies with data for Lagomedio crude oil are similarly identified with the number 2.
3. The column headings provide details on the range of API levels of the crude oil imported by each company. The company price data for 1960 to 1972 have been standardized to 32.0°API using the 2¢ per degree API adjustment formula. No API information was available for Ultramar.
4. The FOB prices reported for Imperial, Texaco, Gulf and Sun, as well as the posted prices are for ports equivalent to La Salina (i.e. Puerto Miranda for Sun's Lagomar and Punta de Palmas for Imperial, Gulf, Texaco, Petrofina, Murphy and Sun's Lagomedio). The FOB prices reported by Shell were ex Cardon. Since this port is near Amuay, these prices were reduced by 3¢ for making FOB comparisons. No information was available on the loading ports used by Ultramar, but the prices shown assume these are for La Salina equivalent ports.

Column Notes:

1. *Sun:* See Table 5 for the FOB prices and I-161 for the transportation costs used. For 1962 to 1966 the transportation costs represented direct deliveries to Montreal; equivalent Portland prices were derived by deducting the pipeline fees shown in I-161. For 1971 the average transportation cost in 1970 and 1972 was used (i.e., 33¢).
2. *Texaco:* See note in Table 5. For 1963, the price shown is the sum of the crude oil price of $2.29 and the freight cost (35¢) reported on shipments of Mata 30° crude oil to Portland. The *asterisked* prices shown in February/March 1974 are ex Punta de Palmas (see I-16G); the other prices are ex La Estacada from I-158. See Table 5 note for the 1970 Lagomar price shown.
3. *Imperial Oil:* The 1960 to 1966 figures are based on the FOB contract price of $2.14 per 32° API plus the freight rates and ocean loss reported in I-78 and I-62. The 1960 figure uses the 1961 freight rates to Portland and Dartmouth and their simple average. For 1961 to 1966, a weighted average freight rate, including ocean loss, (based on the volume imported) is also used. The 1964 figure in parentheses represents a spot purchase by Imperial to which the average freight rate was added. The 1970 to 1972 figures are the prices paid by the offshore subsidiary (see note to Table 5) to which the freight rates in I-62 were added. For 1972, the prices were estimated by deducting the tax reassessments per barrel from the prices paid by Imperial Oil and adding the freight rate from I-62.
4. *Shell:* See note to Table 5. The 1962 to 1971 figures were based on 31° Lagomar prices converted to 32° by the addition of 2¢. Unlike the FOB prices in Table 5 it was not necessary to make a 3¢ reduction in the CIF prices for the port of exit since the FOB adjustment reflected the higher transportation costs of exports from Lake Maracaibo ports. No adjustment was required for the 32° Lagomedio price shown for 1969. For 1973, the prices shown for June, July, October 16 and November are actually for July 1, July 15, November 1 and November 15. For 1974, the first column of prices exclude applicable sulphur premiums and bar tolls for Puerto Miranda; the second column includes these premiums. The third column are the prices reported by the PCB.
5. *Gulf:* See note to Table 5. The FOB prices from I-16E were combined with the freight rates also reported there as well as the corrections noted in I-353. The FOB prices from I-380 and International Sector Documents Book 8, tab 240, p. 78774 were combined with the freight rates shown in I-16E. All prices have been standardized to 32°, including the PCB data for 1974.
6. *Irving:* See note to Table 5.
7. *Murphy:* The 1968 *asterisked* figure is based on an offer by BP for a cargo of Lagomedio to be delivered in September at $2.13 CIF Montreal. This was converted to a CIF Portland price by deducting the Portland terminal and pipeline fees. The figure for 1970 is from *Spur Oil Ltd. v. the Queen*, 81 DTC 5168 at Tab 178 of Book III which gives a CIF price of $1.975 to which was added 1 per cent for insurance. The price in parentheses is the above price minus the 12¢ markup which Murphy Oil Trading added in early 1970 to its Iranian Light third-party prices from Esso International.
8. *Petrofina:* These figures are Canadian purchase or import prices which have been reduced by the Pannac (i.e., offshore subsidiary) dividend per barrel. The second price in 1964, 1971 and the 1972 and 1973 prices are based on 31.4°, 26.7°, 26.8° and 26.8° API MarLago prices converted to 32° API.
9. *Ultramar:* See Appendix E for the transportation cost data used along with an additional one per cent of the C&F price for insurance. An offshore subsidiary markup may be included in the freight costs.
10. *Sun Alternate Value:* The Venezuelan transportation costs cited in Appendix E were added to the FOB prices in Table 5 with an additional one per cent of the C&F price for insurance.
11. *Term Third-Party Price Range:* The Venezuelan transportation costs cited in Appendix E were added to the FOB price range data in Table 5 with an additional one per cent of the C&F price for insurance.

TABLE F-7

Comparative FOB Costs of Imported T.J. Medium[1] (24.0 to 26.9° API) Crude Oil, 1960 to 1982 (U.S. $ per barrel, Ex Amuay Unless Otherwise Specified)[2]

	GULF	TEXACO	IMPE-RIAL	BP	ULTRAMAR GROUP				Exxon Third-Party Price Range	
					Reported Offshore Prices for Imports to Newfoundland			Esso International Contract Prices		
DATE	26°	26°	26°	26°	API	Price	26° API	26° API	Non-Integrated Buyers	26° Posted Price
1960	2.30	2.20*	—	—	n.a.	n.a.	n.a.	n.a.	2.04 — 2.20	2.30
1961	2.10	—	—	—	n.a.	n.a.	n.a.	1.93	1.93 — 2.30	2.30
1962						n.a.	n.a.	1.93	1.93 — 2.18	2.30
Jan.	2.10	2.20	2.05	—	n.a.		n.a.			
Aug.		2.05					n.a.			
1963	2.10	—	—	—	n.a.	n.a.	n.a.	1.93	1.93 — 2.18	2.30
1964	2.10	1.99*	2.03	—	n.a.	n.a.	n.a.	1.93	1.91 — 1.95	2.30
1965	2.10	—		—	n.a.	—	n.a.	1.93 (1.90)	1.90 — 1.93	2.30
Jan.1			2.03							2.30
Feb.1			1.95							2.30
1966	2.10	1.95	1.95	—	—	—	—	1.91	1.88 — 1.96	2.30
1967	2.01	—		—					1.59 — 2.25	2.30
Jan.1			1.95		n.a.	n.a.	n.a.	1.91		2.30
March					n.a.	n.a.	n.a.			
Apr.1			1.91		—	—	—			2.30
May					—	—	—			
June					25.5	1.58	1.59	1.59		2.30
Dec.					25.5	1.58	1.59	1.59		2.30
1968	2.01	—	1.91	1.68					1.56 — 2.02	2.30
Jan.					—	—	—	91.59 (1.56)		2.30
Feb.					26.0	1.59				
April					26.0,27.0	1.59,1.61	1.59			
May					26.0	1.59	1.59			
Nov.										2.30
Dec.					26.0	1.59	1.59			

TABLE F-7 (cont'd)

	GULF	TEXACO	IMPE-RIAL	BP	ULTRAMAR GROUP				Exxon Third-Party Price Range	Tax Paid Cost 26°API	26° Posted Price
					Reported Offshore Prices for Imports to Newfoundland			Esso International Contract Prices	Non-Integrated Buyers		
DATE	26°	26°	26°	26°	API	Price	26° API	26° API			
1969		2.10*		1.74					1.56 — 1.87	1.24	2.30
Jan.	2.01		1.91	1.74	26.0	1.59	1.59	1.59			2.30
Feb.					26.0	1.59	1.59	(1.56)			
March					26.0	1.59	1.59	(1.56)			
Apr.			1.89		26.0	1.59	1.59	1.59			2.30
May					26.0	1.59	1.59	(1.56)			
June					26.0	1.59	1.59	1.59			
July					26.0	1.59	1.59	1.59			
Aug.					26.0	1.59,1.57	1.59,1.57	1.59			2.30
Sept.	2.01				26.0	1.59	1.59	1.59			2.30
Nov.	2.01			1.74	26.0	1.59	1.59	1.59			2.30
Dec.					26.0	1.59	1.59	1.59			
1970	2.01			1.74					1.56 — 1.94	1.55	2.01
Jan.		1.80*	1.89		26.0	1.59	1.59	1.59 (1.56)	(1.56 — 1.89)*		
Feb.					26.0	1.59	1.59				
March					26.0	1.59	1.59	1.59 (1.56)			
Apr.			1.79		27.0	1.61	1.59	"			
May					27.0,26.0	1.61,1.59	1.59	"			
June					26.0	1.59	1.59	"			
July					26.0	1.59	1.59	"			
Aug.					26.0	1.59	1.59	"			
Sept.20			2.01		24.0	1.55	1.59	"			
Oct.					26.0	1.59	1.59	"			
Nov.				1.74				"			
Dec.17					26.0	1.59	1.59	1.70 (1.67)	(1.67 — 1.94)*		

	GULF	IMPE-RIAL	BP	ULTRAMAR GROUP											
				Reported Offshore Prices for Imports to						Esso International Contract Prices Per			Exxon Third-Party 26° Price Range	Tax Paid Cost 26°API	26° Posted Price
				Newfoundland			Quebec						Non-Integrated Buyers		
Date	26°	26°	26°	API	Price	26° API	API	Price	26° API	24° API	25°API	26°API			
1971	2.43												1.63 — 2.67		
Jan.1	2.09*	2.01	1.85	26.0	1.70	1.70	—	—	—	1.66	1.68	1.70	(1.63 — 2.37)*	1.559	2.09
Feb.				26.0	1.70	1.70	—	—	—						
March 1				26.0	1.70	1.70	—	—	—	1.66	1.68	1.70			
Mar. 18	2.66*		2.22	26.0	2.061	2.061	—	—	—	2.046	2.054	2.061	(1.99 — 2.67)*	1.935	2.665*
Apr.1		2.44		26.0	2.061	2.061	—	—	—						2.647
May				26.0	2.061	2.061	—	—	—	2.156	2.164	2.171			
June 1				26.0,27.0	2.061,2.069	2.061	24.0	2.356	2.371	2.156	2.164	2.171			2.647
July 1				26.0	2.261	2.261	24.0	2.356	2.371	2.156	2.164	2.171			2.625
Aug. 1				27.0,24.0	2.2685,2.246	2.261	24.0	2.356	2.371	2.156	2.164	2.171			2.625
Sept.				26.0	2.261	2.261	24.0	2.356	2.371	2.156	2.164	2.171			
Oct. 1				26.0,27.0	2.261,2.2685	2.261	25.0	2.3635	2.371	2.156	2.164	2.171			2.640
Nov.				26.0	2.261	2.261	25.0	2.3635	2.371	2.156	2.164	2.171			
Dec.				26.0	2.261	2.261	25.0	2.3635	2.371	2.156	2.164	2.171			
1972													2.22 — 2.62		
Jan.	2.61	2.63	2.22	—	—	—		—	n.a.	n.a.	n.a.		(2.25 — 2.62)*		2.951
Feb.			2.42*	25.6	2.539	2.542	25.6	2.539	2.542					2.128	
March				25.6	2.539	2.542	25.6	2.539	2.542				(2.22 — 2.52)*		
Apr.	2.59	2.44		n.a.	2.522	n.a.		2.522	n.a.					2.11	2.921
May				n.a.	2.522,2.574	n.a.	n.a.	2.522	n.a.						
June	2.58			n.a.	2.514	n.a.	n.a.	—	n.a.						
July				n.a.	2.510	n.a.	n.a.	2.51	n.a.					2.095	
Aug.	2.58			n.a.	2.402,2.418	n.a.	n.a.	2.41	n.a.						
Sept.	2.58			n.a.	2.41,2.402	n.a.	n.a.	2.41	n.a.						
Oct.	2.58			n.a.	2.41	n.a.	n.a.	2.41	n.a.						
Nov.	2.58			n.a.	2.402	n.a.	n.a.	2.41	n.a.						
Dec.	2.58			n.a.	2.402,2.41	n.a.	n.a.	2.41	n.a.						

TABLE F-7 (cont'd)

	GULF		IMPERIAL		ULTRAMAR GROUP Reported Offshore Prices for Imports to						Esso International Contract Prices Per	
					Newfoundland			Quebec				
DATE	26° Company	PCB	26° Company	PCB	API	Price	26° API	API	Price	26°API	24° API	26° API
1973		—		—	n.a.		n.a.	n.a.		n.a.	n.a.	n.a.
Jan.	2.69*		2.56			2.517			2.501			
Feb.	2.72		n.a.			2.511,2.543			2.543,2.575			
March	2.87*		n.a.			2.667,2.745			2.543,2.68			
April	2.94		2.88			2.745			2.667,2.745			
May	2.94		n.a.			2.745			2.745			
June	2.94		n.a.			2.745			2.745			
July			n.a.			2.924			2.924			
August			n.a.			3.159			3.159			
Sept.	3.46		n.a.			3.376			3.376,3.296			
Oct.1			n.a.			3.626			3.326,3.546			
Nov.	5.29		n.a.			3.626,4.977 5.19			4.977,5.19			
Dec.			5.49									
1974										n.a.	n.a.	n.a.
Jan.	9.46		9.16	9.16	n.a.	—	n.a.	n.a.	—			
Feb.	9.46	9.52	9.58		n.a.	9.474	n.a.	n.a.	9.474			
March	9.46				n.a.	9.474	n.a.	n.a.	9.474			
April		9.52	9.64	9.61	n.a.	9.48	n.a.	n.a.	9.58,9.474,9.5612			
May				9.62	n.a.	9.48	n.a.	n.a.	9.474,9.468,9.48,9.794			
June					n.a.	9.486	n.a.	n.a.	9.474,9.48,9.486, 9.5326,9.794			
July			9.98		n.a.	9.666	n.a.	n.a.	9.666,9.703,9.555, 9.518,9.6696			
August			10.38	10.39	n.a.	9.023	n.a.	n.a.	—			
Sept.					n.a.	—	n.a.	n.a.	9.2553,9.0854,9.0448			
Oct.			10.51		n.a.	—	n.a.	n.a.	—			
Nov.					n.a.	—	n.a.	n.a.	—			
Dec.					n.a.	n.a.	n.a.	n.a.	n.a.			

	EXXON 26°	DOE 26°		
DATE	Third-Party Price Range for Non-Int	Third-Party Rep. Price	Tax Paid Cost 26° API	Min. Tax Value 26°
1973	2.44 — 5.49			
Jan.			2.210	3.094
Feb.				
March			2.382	3.390
April			2.460	
May				
June				
July			2.614	3.752
August			2.857	4.163
Sept.			3.057	4.492
Oct. 1		5.21	3.323	4.925
Nov.		5.21	4.894	7.261
Dec.		5.40	5.011	7.462
1974	9.01 — 10.45			
Jan.		9.21	9.055	13.706
Feb.		9.56	9.4684	
March		9.81		
April		9.51		
May		9.52		
June		9.52		
July		9.92	9.798	14.242
August		9.99		
Sept.		10.19		
Oct.		10.38		
Nov.		10.19		
Dec.		10.38		

TABLE F-7 (cont'd)

	IMPERIAL		EXXON 26°	DOE 26°	Tax Paid			GULF		TEXACO	IMPERIAL		
DATE	Company	PCB	Third-Party Price Range for Non-Int	Third-Party Rep. Price	Cost 26° API	Min. Tax Value 26°	DATE	Company	PCB	PCB	Company	PCB	Min.Sales Price 26°
1975			10.62 — 11.12				1977	n.a.		—			
Jan.	10.95	10.91		11.27	10.341	13.471	Jan.				12.72	12.74	12.72
Feb.				11.05			Feb.					12.72	
March				10.82			March					12.73	
April	10.85	10.86		10.82			April					12.77	
May		10.86		10.80			May						
June		10.80		10.68			June					12.76	
July	10.65	10.61		10.48			July						
August				10.48			August					12.73	
Sept.		10.68		10.52			Sept.						
Oct.	11.35	11.31		11.17	11.137	14.573	Oct.		12.81		12.82		12.82
Nov.				11.25			Nov.					12.83	
Dec.		11.32		11.25			Dec.					12.85	
1976			n.a.			Min. Sales Price	1978	—	—	n.a.			
Jan.	11.12			11.09	11.137	11.12	Jan.				12.82	12.86	12.82
Feb.		11.16		11.12			Feb.					12.85	
March		11.16		11.08			March					12.84	
April	11.22	11.23		11.18		11.22	April				12.72	12.83	12.72
May		11.25		11.19			May					12.72	
June		11.25		11.17			June					12.78	
July	11.32	11.34		11.27		11.32	July						
August		11.35		11.22			August					12.75	
Sept.		11.35		11.25			Sept.						
Oct.	11.65	11.62		11.46		11.65	Oct.						
Nov.		11.66		11.49			Nov.						
Dec.		11.66		11.46			Dec.					12.75	

DATE	TEX-ACO PCB	IMPERIAL Actual	IMPERIAL PCB	Third-Party DOE Rep. Price Leona Mix 25°	Third-Party DOE Rep. Price Leona Mix 26°	Min.Sales Price	DATE	Min.Sales Price 26°
1979							1981	
Jan.	13.35*	13.36	13.78	13.16	13.22	13.36	Jan.	32.88
Feb.			13.86	13.16	13.22		Feb.	
March			13.35	13.17	13.23		March	
April		15.76	15.75	15.54	15.60	15.76	April	
May		16.36	16.35	16.14	16.20	16.36	May	
June			16.35	16.12	16.18		June	
July		19.31	19.30	19.17	19.23	19.31	July	
August			19.29	19.18	19.24	19.48	August	
Sept.			19.36	19.17	19.23		Sept.	
Oct.		19.48	19.49	19.45	19.51		Oct.	
Nov.			19.52	19.43	19.49		Nov.	
Dec.		23.48	23.50	23.58	23.64	23.48	Dec.	
1980	—			n.a.	n.a.		1982	32.88
Jan.		25.20				25.20	Jan.	
Feb.						26.78	Feb.	
March							March	
April							April	
May						29.28	May	
June			29.69				June	
July		29.88	30.22			29.28	July	
August			29.83				August	
Sept.			29.93				Sept.	
Oct.			30.01				Oct.	
Nov.			29.74				Nov.	
Dec.			29.71				Dec.	

Notes to Table F-7 on Comparative FOB Costs of Imported T.J. Medium (24.0 — 26.9° API) Crude Oil, 1960 to 1982

General Notes:

1. For all companies, except for certain years for Ultramar for which specific API characteristics were not available, the prices shown have been standardized to 26.0° API using 2¢ per degree from 1958 to 1973, 6¢ for 1974 to 1976, 10¢ from 1977 to 1978 and 6¢ thereafter. For certain companies data on Venezuelan Medium crude oils other than T.J. Medium were used; these were mostly for crude oils with API's ranging from 24.0 to 28.0°. The Petroleum Compensation Board (PCB) prices shown for 1974 to 1982 were not standardized to 26° API. Variations in API plus any variations in sulphur content likely accounts for the differences observed between PCB prices and prices available from other sources which have been standardized.

2. The data for Imperial Oil, Gulf and Texaco are ex Amuay or equivalent ports (i.e., Puerto La Cruz). Prices ex La Salina for Ultramar were converted to ex Amuay by the addition of 3¢ per barrel. No information is available on the specific loading port used consistently by BP. It is assumed to be ex Amuay. If it is La Salina, the prices shown are understated by 3¢.

Column Notes:

1. *Gulf:* The 1960 price is taken from the contract price for that year, which was the posted price. The January and April 1972 prices are contract prices for T.J. Medium 26° ex Amuay from the International Sector documents filed by the Director in Book 6, tab 240, p. 78766. In I-16E, a price of $2.65 was reported for 26.8° imports for January to March 1972; this would be $2.64 for 26°. For September, 1969 and August to December, 1972, the figures are based on FOB Prices ex La Salina. The addition of 3¢ converts these prices to FOB prices ex Amuay. The *asterisked* prices for January 1 and March 20, 1971 are the tax reference prices in effect in that year; the contract prices were reported to be at these prices. The *asterisked* prices in January and March 1973 are from I-361, tab 22, p. 78431. The PCB prices have been standardized to 26° from prices of $9.53 (26.2°) in both February and March 1974 and $12.85 (26.4°) in 1977.

2. *Texaco:* The 1960 price is for Sylvestre crude oil at 26° API. In 1962 imports were reported at the price of $2.20, but on August 7, the contract price was lowered to $2.05. The 1964 price reflects on average reduction of 6¢ per barrel on the contract price of Venezuelan crude oil shipped to Montreal (see note on Table 5). The 1969 and 1970 prices are based on $2.14 and $1.84 prices for Mesa 28° API adjusted to 26°. The Mesa 28° price used for 1970 was found by subtracting pipeline fees (10.4¢) and freight costs (24.9¢) from the $2.194 CIF price at Montreal (see I-16G). For January, 1979 the price shown was for a 24° T.J. Medium price adjusted to 26° by adding 10¢ per API; the 1978 API formula was used because the cargo was loaded in 1978.

3. *Imperial Oil:* For 1968 to 1972, the figures shown are the offshore subsidiary's purchase prices.

4. *BP:* There is some evidence to suggest that BP purchased T.J. Medium from Esso International in exchange for purchases by Esso of Iranian Light crude oil from BP Trading Co. Ltd. See Exhibit I-289. The 1968 price is ex Amuay. The price shown for February 1972 is actually for January 20th.

5. *Ultramar:* The prices shown were converted from FOB ex La Salina to FOB ex Amuay by the addition of 3¢ per barrel. Two sets of prices are shown. (a) Offshore Prices: The offshore prices for June 1967 to November 1974 were reported by Ultramar in I-335. Although the API levels were not given in I-335, those shown reflect the API levels for the lowest prices reported in I-50, Appendix 3 which gives information on third-party sales by Esso International, the source of the Ultramar Group's crude oil supplies. In S-30, (at pp. I-9 to I-11), Imperial reported that the lowest prices for 1968 to 1972 in I-50 were for the Ultramar Group. In 1974 there were several retroactive price adjustments reported in I-335. Only the last update reported in I-335 is shown. Some sales to the Newfoundland and Quebec refineries in 1974 were invoiced in August or September, respectively, although the offshore supplier (Ultramar Liberia) first reported its original purchases of those crude oil shipments in March 1974. (Appendix Table E-7 provides more information on offshore prices). (b) Contract Prices: The Esso International contract prices for 1961 to 1965 are based on an Irving Oil exhibit (I-263) which reported that Ultramar had a 20-year term contract at the posted price minus 40¢ (see Appendix E for more details). With posted prices at $2.30 ex Amuay and $2.27 ex La Salina, the net prices would be $1.90 or $1.87. The discrepancy between the $1.93 price shown and $1.90 is likely due to confusion with the loading ports used by Ultramar. The $1.93 price was the lowest price found in the I-50, Appendix 3 list of third-party prices for T.J. Medium from 1960 to 1963. In 1964/1965 lower prices than $1.93 are reported, but information from I-78 (tabs C4 and C5) suggests that for 1965, as well as for 1968 to 1970, Esso International sometimes sold crude oil to Ultramar ex Amuay at the lower La Salina prices. These prices are shown in parentheses. The 1966 to December 17, 1970 contract prices are based on I-78A. The January to March 1, 1971 prices are also based on I-78A for some of the shipments to the Newfoundland refinery, while the March 18 to December 1971 prices (for shipments to the Quebec refinery and also for some of the shipments to Newfoundland) are based on M-675 and I-330 which contain contracts for the new Quebec refinery for T.J. Medium 24.0 to 24.9° between (i) Esso International and Ultramar Panama, (ii) Ultramar Panama and Ultramar Liberia and (iii) Ultramar Liberia and Golden Eagle Canada (now called Ultramar Canada). Under these contracts, Ultramar Panama could also supply volumes of T.J. Medium to the Newfoundland refinery at the same terms available to the Quebec refinery to replace equivalent volumes of the Ultramar Group's proprietary crude oils (i.e., Oritupano and Mercedes) which were used at Quebec. Exhibit I-335 reports imports to Quebec

Notes to Table F-7 on Comparative FOB Costs of Imported T.J. Medium (24.0 — 26.9° API) Crude Oil, 1960 to 1982 (cont'd)

Column Notes:

of Oritupano in August 1971 (180,775b), February 1972 (175,704b), March 1972 (1,015,981b) and of Mercedes in December 1972 (243,633b). Therefore, the prices reported under the Quebec refinery contract are also applicable to Newfoundland refinery imports for 1971 and 1972. The contract with Esso International included provisions for price changes to reflect changes in Host Government Take. It was to last until December 31, 1980, but prices could be renegotiated at any time after December 31, 1974, with any changes to take effect on January 1, 1976. Ultramar ceased imports of T.J. Medium at the end of 1974. (c) Offshore versus Contract Prices: The contract prices show that the offshore prices reported by the Ultramar Group in I-335 from July 1971 to December 1971 also included markups of 20 and 9¢ for imports to Quebec and Newfoundland, respectively. The markup for shipments to Newfoundland was lower because of the higher freight costs that were incurred due to the use of smaller tankers. Information on whether the level of the additional markup remained the same, changed or disappeared between 1972 to 1974 is not available. When comparing the offshore and contract prices one must remember there was often a lag of several months between the offshore import price and contract price changes. This reflected the fact the imports in any month represented loadings in a prior month in Venezuela. The 120 days of credit provided to Ultramar by Esso International (see M-675 and I-78A) may also have delayed the implementation of any contract price change on the offshore invoice price of imports into Canada. (For example, while the contract price increased in May 10, 1971, prices reported on imports to Newfoundland only changed in July.) (d) API Adjustment Formulae: For 1960 to March 1, 1971, variations in API levels were adjusted using the traditional 2¢ per degree rule. For March 18 to December 1971, variations in offshore prices were made using $0.0075 per degree following the contract provisions between Ultramar Liberia and Golden Eagle Canada (M-330). This formula was also used for the Esso International contract price because M-675, while stating that the 2¢ rule was in effect, also indicated that the API gravity adjustment provisions could be changed if the Venezuelan government imposed changes. This in fact occurred in early 1971 when the 1.5¢ per degree rule was adopted. The $0.0075 formula was used because it matched the changes in prices being reported. The API levels for 1972 were only given (in I-335) for February and March. It was therefore not possible to identify the API levels of the offshore prices for April 1972 to November 1974. They could range from 24 to 27 degrees based on the previous API levels of imports.

6. ***Exxon Third-Party Price Range:*** These figures are the minimum and maximum prices paid to Esso International by non-integrated third-party purchasers. The 1970 figures in parentheses represent a breakdown of the two sets of prices shown per buyer in 1970; I-78A at Tab C4 and C5 gives a date of December 17 for the price increase on sales to the Ultramar Group. For 1971 to 1975, the data represent annual and sub yearly price ranges only. It was not possible to present more relevant monthly price range data for this period. The 1971 and 1972 sub-yearly price ranges were taken from I-78A, tab 6b, pp. 7 to 10 which listed prices for January to March 17 and March 18 to December 31, 1971 as well as January to March and April to December 1972. These data were adjusted with the price information in I-50 to obtain the prices shown in parentheses. Reconciliation of the prices from the two sources required the conversion of La Salina prices to FOB ex Amuay prices by adding 3¢. Although the prices shown mainly concern sales of T.J. Medium, some prices represent sales of other Venezuelan medium crude oils such as Tigre and LaRosa, both at 24° API. The prices for these two crude oils were converted to 26° using the 2¢ rule to 1973 and 6¢ for 1974 to 1975. The LaRosa prices were also adjusted by the addition of 3¢ to convert from FOB ex La Salina to FOB ex Amuay. The Tigre prices were ex Puerto La Cruz and therefore were the same as ex Amuay prices. If sales of these two extra crude oils were excluded, the maximum annual prices in 1960, 1968, 1969 and 1970 would be lower (at $2.04, $1.92, $1.63 and $1.87) while both minimum and maximum prices in 1966 would be $1.91. The subperiod maximum prices in 1970 would fall to $1.87 and $1.76, respectively. In 1974, the minimum prices would be higher ($9.20).

7. ***Tax Paid Cost:*** This is the cost of equity crude oil. It covers production costs plus host government taxes and royalties (see Director's Green Book, Volume III, p. 42 for 1969 and Exhibit I-107 for 1970 to 1976). It includes freight premiums, but excludes premiums for low sulphur content.

8. Posted Price: The price shown for March 18, 1971 is actually for March 20th. The 1970 to 1975 figures are the minimum tax export values including applicable freight premiums.

9. ***DOE Third-Party Representative Price:*** Representative price was defined by the U.S. Department of Energy (DOE) as being the lowest price at which 50 per cent (by volume) of third-party transactions took place per month. That is, it was the weighted median price. For October 1973 to September 1974, the figures shown were obtained by subtracting 10¢ from the DOE maximum price. Given the definition of the maximum price, these figures provide the maximum value that the representative price could be in these months (see notes to Table 1 for more details). The 1979 figures were not available for T.J. Medium; the values published for Leona mix, assumed to be 25° API, are converted to 26° for comparative purposes.

10. ***Minimum Tax Export Value:*** These are tax reference values used by the Venezuelan government from 1973 to 1975. They include freight premiums, but exclude any applicable sulphur premiums.

11. ***Minimum Sales Price:*** The figures shown for 1976 onwards are equivalent to official government selling prices.

TABLE F-8

Comparative FOB Costs of Imported Nigerian (24.0 — 37.0° API)[1] Crude Oils, 1965-1982
(U.S. $ per barrel)

DATE	GULF		IMPERIAL		TEXACO	BP		PETROFINA		Term Third-Party Prices Adj. to Gulf API	Nigerian Bonny Light					
											37° API			Adjusted to Gulf API		
	API	Price	API	Price		API	Price	API	Price	Range (Average)	Official	Spot	Posted	Official	Spot	Posted
1965	34.0	1.75	—	—	—	—	—	—	—	1.33-1.94 (1.68)	2.00	1.68	2.23	1.94	1.62	2.17
1966	34.0	1.70	—	—	—	33.0	n.a.	—	—	1.53-1.77 (1.68)	1.90	1.63	2.23	1.84	1.57	2.17
1967	34.0	1.70	32.6	1.81	—	33.0	n.a.	—	—	1.70-1.73 (1.72)	1.95	1.76	2.23	1.89	1.70	2.17
1968	35.0	1.72	—	—	—	—	—	—	—	1.65-1.80 (1.72)	2.00	1.88	2.23	1.96	1.84	2.19
1969	35.0	1.80	—	—	—	29.0 24.0	1.75* 1.65*	—	—	n.a.	1.95	1.83	2.23	1.91	1.79	2.19
1970	35.0	1.80	—	—	n.a.	29.0 24.0	1.75 1.65	—	—	n.a.	2.10	2.26	2.23	2.06	2.22	2.19
1971			—	—	—			28.9	2.25*							
Jan.	35.0	2.10				29.0 24.0	1.88 1.78			n.a.	2.35 2.65	2.66 2.58	2.64	2.31 2.61	2.62 2.54	2.60
Mar. 20	35.0	2.72				29.0 24.0	2.52 2.42									
Apr.																
May																
June																
Sep. 10						30.3 24.8	2.52 2.42				2.05	2.75		1.99	2.69	
1972			—	—	n.a.			26.9	2.21*							
Jan. 1	36.0	2.74				30.3 24.8	2.52 2.42			n.a.	2.80 2.80	2.70 2.66	3.39	2.77 2.77	2.67 2.63	3.36
Jan. 20	36.0	2.90														
Feb.15						30.3	2.685									
July																
Sept.	36.0	2.85				30.3	2.685				2.80	2.73		2.77	2.70	

TABLE F-8 (cont'd)

	GULF				BP				TEXACO		PETROFINA		ULTRAMAR		SUN OIL					
	Company		PCB		Company		PCB		PCB		Company		PCB		Third-Party Non-Integrated		DOE Third-Party Rep. Price 34°	Bonny Light 37° API		
Date	API	Price	API	Price	API	Price	API	Price	API	Price	API	Price	API	Price	API	Price	34°	Offi-cial	Spot	Posted
1973			—	—	30.3		—	—	36.0	n.a.	—	—	—					3.20	3.40	4.75
Jan.	36.0	3.02				2.80				"								3.10	3.05	
Feb.	"	"								"										
March	"	"								"										
April	"	3.15				3.21				"								3.30	3.75	
May	"	"								"										
June	37.3	3.47				3.35				"										
July	"	3.55				3.43				"								3.85	4.50	
Aug.	36.8	3.62*				3.53				"										
Sept.	"	3.62*				3.53				"										
Oct.1	"	6.40				3.52				"							7.07	5.90	7.00*	
Oct. 20	"					6.02				"										
Nov.	36.4	6.46				6.02				"							7.07			
Dec.	36.8	6.65				5.88				"							7.10			
1974	36.2	10.48			30.3						31.0	8.60*						11.40	12.92	14.19
Jan.						10.86	31.1	10.87									16.94	10.75	15.50*	
Feb.			36.4	9.95													16.47			
March			35.7	9.95			30.8	10.85									12.54			
April			36.4	9.95													14.59	11.55	13.00	
May																	13.52			
June													40.2	10.45*			13.26			
July															30.0	13.04	12.80	11.55	11.50	
Aug.															37.-40.0	14.22	12.50			
Sept.							30.8	11.61									12.18			
Oct.						11.10*											11.70	11.75	11.70	
Nov.							30.7	n.a.									11.93			
Dec.							31.5	12.10	31.3	11.77							11.85			
							25.5	11.96												

TABLE F-8 (cont'd)

	GULF				TEXACO		BP								
	Company		PCB		PCB		Company		PCB		DOE Third-Party Rep. Price 34°	Bonny Light 37-40° API			Forcados 31° OGSP
Date	API	Price	API	Price	API	Price	API	Price	API	Price		Official	Spot	OGSP	
1975	36.0°	12.00°										11.61	11.50		n.a.
Jan.	"	"					30.3	11.90			11.74	11.80	11.50		
Feb.	"	"						"	31.0	11.91	11.75				
March	"	"					31.0	"	30.9	n.a.	11.81				
April					30.9	11.66		11.66			11.62	11.80	11.40		
May					31.2	11.66		"			11.63				
June								"	30.1	11.66	11.36				
July					30.7	11.39		11.59			11.23	11.43	11.50	11.43	
Aug.								11.41			11.23				
Sept.			36.6	11.37				"	30.9	11.41	11.33				
Oct.								12.56			12.55	11.43	11.60	12.70	
Nov.			35.5	12.76	31.1	12.64		"	30.9	12.56	12.61				
Dec.					31.3	12.64		"	31.3	12.57	12.61				
1976	36.0	12.91*			37.3	12.92*						12.97	13.14		
Jan.			30.5	12.84	31.0	12.74	31.0	12.70			12.76	12.84	12.90	12.70	n.a.
Feb.			30.6	12.84	30.6	12.73			30.8	n.a.	12.78				
March			36.9	12.93					31.0	12.71	12.82				
April									31.1	"	12.86	12.84	12.95	12.89	12.71
May									30.9	12.70	12.82				
June									31.0	12.71	12.89				
July								12.90			13.07	13.10	13.15	13.10	12.92
Aug.									30.9	12.90	13.03				
Sept.											13.05				
Oct.								13.05			13.25	13.10	13.56	13.25	13.07
Nov.									30.6	13.04	13.27				
Dec.									30.5	"	13.42				

TABLE F-8 (cont'd)

	BP						IMPERIAL							OGSP	
	PCB		Bonny Light 37-40° API			Forcados 31°		PCB		DOE Third-Party Rep. Price	Bonny Light 37-40° API			Forcados 31°	Nigerian Medium 26°
Date	API	Price	Official	Spot	OGSP	OGSP	Date	API	Price		Official	Spot	OGSP		
1977	30.7	14.09	14.48	14.30			1979	—	—						
Jan.			14.33	14.45	14.31	14.08	Jan.			15.21	14.84	21.05	14.80	14.44	14.23
Feb.							Feb.			15.12					
March							March			15.12					
April	30.5	14.24	14.33	14.45	14.61	14.40	April			18.72	19.52	29.90	18.50	18.10	17.50
May							May 16			20.98			20.96	20.60	20.00
June							June			21.40					
July			14.63	14.28	14.28	14.40	July			24.27	23.41	35.75	23.47	23.10	22.00
Aug.							Aug.			25.60					
Sept.							Sept.			26.76					
Oct.			14.63	14.05			Oct.			25.87	26.14	40.33			
Nov.							Nov. 6			31.26			26.24	25.87	24.77
Dec.							Dec. 17			32.00			29.97	29.80	28.70
1978	—	—	14.10	14.21			1980			n.a.					
Jan.			14.33	14.00	14.31	14.01	Jan.				34.67	38.92	29.97	29.80	28.70
Feb.							Feb. 4						34.18	34.01	32.91
March							March								
April			14.33	13.89	13.93*	13.58*	April				36.72	38.15	34.69	34.52	33.42
May							May 22						36.69	36.52	35.42
June							June	29.5	36.21						
July			13.87	13.98	13.85*	13.55*	July	25.4*	36.09*		37.73	34.77	37.00	36.83	35.73
Aug.							Aug.								
Sept.							Sept.								
Oct.			13.87	15.00	14.10	13.60*	Oct.								
Nov.							Nov.								
Dec.							Dec.								

TABLE F-8 (cont'd)

	GULF		UNTRAMAR		IMPERIAL		OGSP	
	PCB		PCB		PCB			
Date	API	Price	API	Price	API	Price	Bonny Light 37° API	Nigerian Medium 26 °
1981	—	—			—	—		
Jan.							40.00	38.70
Feb.								
March			34.9	36.76				
April	37.7	40.04						
May								
June								
July								
Aug. 26							36.00	34.70
Sept.								
Oct.							34.50	33.20
Nov.							36.50	35.20
Dec.								
1982								
Jan.							36.50	33.75
Feb.								
Mar. 20							35.50	33.50
April								
May					25.1	33.51		
June								
July							35.50	33.50
Aug.								
Sept.								
Oct.								
Nov.								
Dec.								

Notes to Table F-8 on Comparative FOB Costs of Imported Nigerian (24.0 — 37.0° API) Crude Oils, 1965-1982

General Notes:

1. Since Gulf was the main importer of Nigerian crude oil from 1965 to 1976, the price data for other importers, as well as third-party sources, may be adjusted to reflect the API levels of the Gulf Canada imported Nigerian crude oil. Following international convention, prior to March 20, 1971, 2¢ per barrel per API degree was the adjustment formula used. From March 20, 1971 to 1973, 3¢ per barrel per API degree was used. For 1974, the 6/3¢ formula involved using 6¢ above 34° API and 3¢ below 34° API. For 1975 to 1982, the formula followed was 3¢ per API degree. Although expressed here in cents per degree API, the formulae used from 1971 onwards involved adjustments for variations of one tenth of one degree API.

   The above API adjustment formulae were taken from the various international agreements between OPEC and the petroleum companies. The adjustment formulae followed internally by Gulf, BP and Texaco after March 20, 1971 were found to be too divergent to attempt a comparison on this table. For example, BP from March 20, 1971 to June 30, 1975 indicated that 1¢ per API degree would be used for any variations in API levels (Exhibit I-289, Tab 4). This likely reflected the fact that the tax paid cost of the crude oil to its parent company only varied by approximately 1¢ per API degree over much of that period. On the other hand, Gulf's contracts kept the traditional 2¢ per API degree formula until the end of 1973 (see Exhibit I-380). When BP adopted the 3¢ per degree formula on July 1, 1975, Gulf was using 6¢ per API degree. It is only in 1976 that both companies used the same (i.e. 3¢ per API degree) formula. Texaco used the 1.5¢ formula from 1971 to 1973, the 6/3¢ formula for 1974 and 1975 and the 3¢ formula for 1976. Such wide divergences in adjustment formulae between companies are understandable inasmuch as companies are typically concerned with limited variations (i.e. of less than 2 degrees) in their imported crude oil API levels. Simple inertia to the adoption of new formulae or the need to honor existing contractual relationships may also have resulted in the observed delays in their implementation by individual petroleum companies.

   The API formulae used to make adjustments for variations of at least one tenth of a degree in API levels were generally not found in Canadian petroleum company contracts until several years after their introduction in the Teheran, Tripoli and Lagos agreements of 1971 with OPEC. Gulf in its Exhibit I-16E appears to have retroactively applied the practice to its crude oil prices for 1966 to 1974. The API figures shown for BP are the lower levels of the ranges found in Exhibits I-289, tab 4 and I-314. This range was 0.9 degrees API prior to March 1975 and 0.09 thereafter.

Column Notes:

1. *Gulf:* The API levels and prices shown from 1966 to April 1973 inclusive are taken from the contracts in effect (see I-380) rather than from I-16E which often indicates the prices of imports for the average API level of the Nigerian crude oil imported per year or for several months within a year. The exception is the price shown in September 1972 which was estimated by extrapolation from the weighted (by volume) average of the prices of $2.927 and $2.871 for March to August and September to December in I-16E which at $2.90 for 37° matches the 36° price of $2.88 reported as the cost of Nigerian crude oil for the last half of 1972 (see I-361, tab 22, p. 78431). That is, since the contract 36° price was $2.90 (or $2.92 at 37°) in January 20, it must have been reduced to $2.85 for 36° (or $2.87 for 37°) in September. It must also be noted that Gulf Canada was to have paid the contract prices for only the first 10,000 barrels per day of Nigerian crude oil imported in 1972. The second 10,000 b/d was to have been at a Ceuta 31° equivalent or reduced price of $2.578 because the extra Nigerian crude oil was to replace the volume of less costly Ceuta 31° crude oil shipments that were not supplied for the Montreal refinery. However, Gulf Canada reported in I-361, tab 13, pp. 65297-98 that its affiliated supplier (Gulf Oil Trading Company) had reneged on this arrangement for the second half of 1972. (As shown in I-16E its supplier subsequently also reneged on this commitment for the first half of 1972.) The average September price of $2.85 actually represented a discount of 10¢ since the discount only applied to the second 10,000 b/d of imports. Nevertheless, it was still much lower than the 32.6¢ discount which had been originally agreed upon (see I-361, tab 8, pp. 62991 and 62995-98; tab 11, p. 65302). A similar 10¢ reduction appeared in the Ceuta 31° contract price on December 20th to give recognition to the cost savings available because of the transshipping made possible using Very Large Crude Oil Carriers (VLCC's) to Pt. Tupper and smaller tankers to Portland. The August/September prices are an average price reported in I-16E for these two months. For 1974, the annual price is from I-16E. The *asterisked* figures shown for 1975 and 1976 are contract API levels and prices; monthly PCB prices are also shown for 1974 to 1976 and 1981.

2. *BP:* From 1969 to January 20, 1972, BP reported identical price data for 34° or 36.2° API Nigerian Light and 29.0 or 31.2° API Forcados (Nigerian Export Blend) crude oil (see Exhibit I-289, Tab 4). Since Forcados was the crude oil imported, only the 29.0 or 31.2° contract prices are shown. Although imports were reported in 1966 and 1967, FOB data for these years are not available. For 1969, no imports were made at the prices shown. The figure shown for October 1974 was an authorized FOB price for provisional payments before expected increases in tax paid cost and participation charges were finalized. The two sets of PCB figures for December, 1974 represent imports of two different types of Nigerian crude in that month. For 1982 no FOB data were available for the CIF price reported in Table 9.

Notes to Table F-8 on Comparative FOB Costs of Imported Nigerian (24.0 — 37.0° API) Crude Oils, 1965-1982 (cont'd)

Column Notes:

3. ***Petrofina:*** The figures for 1971, 1972 and 1974 are Canadian purchase or import prices net of the Pannac (i.e., Offshore Subsidiary) Dividend per barrel. The figures for 1974 reported by Petrofina (see Exhibit I-16H) were not found in the PCB records filed by the Director (Exhibit I-114).

4. ***Term Third-Party Prices:*** These represent the range and simple average of prices observed by Adelman and Newton from 1965 to 1968 (see Exhibit I-51A, Tab II-4 and Tab II-5, respectively). The Adelman Nigerian crude oil data originally had been adjusted for API and sulphur content variations to compare with Iranian heavy (31° API) crude oil. The procedure followed by Adelman was reversed to obtain the price observations that were used along with the Newton data to obtain the figures shown on this table. These prices were then adjusted to match the Gulf API levels of 34° for 1965 to 1967 and 35° for 1968, using the 2¢ adjustment formula.

5. ***Official, Spot, Posted, OGSP:*** (a) The first set of figures for Nigerian Bonny Light 37.0° API are from Exhibit I-18 for the 1965 to 1976 annual data and I-23 or I-51D, Tab VII-8 for the 1970 to 1980 semi-annual or quarterly data. The posted prices for 1965 and 1966 may be extrapolations by Petroleum Intelligence Weekly, the source of these figures, because Nigerian crude was officially posted in 1967 only. (At that time, the posted prices were set by BP and Shell at $2.17 for 34° API crude and $2.03 for 27° API crude. The figures found in the Petroleum Intelligence Weekly Exhibits had been retroactively adjusted by 2¢ per API degree, to 37°). (b) The second set of figures reflect adjustments to the relevant Gulf API levels in the years 1965 to 1972. For API adjustments, the 2¢ formula was used until March 20, 1971. Thereafter the 3¢ rule was applied to the end of 1972. No adjustments were made for 1973 to 1980 as the Gulf API levels were close to 37° API. Gulf was not the major importer after 1976. (c) It may be noted that the official prices represent the prices that were paid on term contracts to the end of 1974. For 1975 and 1976, they include any premiums or discounts, respecting official government selling (OGSP) prices, which are applicable to all buyers. The *asterisked* OGSP figures for 1978 reflect discounts off the OGSP price of $14.10 for Bonny Light and $13.70 for Forcados. The *asterisked* spot prices for the fourth quarter of 1973 and the first quarter of 1974 were reported to have covered only a very small number of transactions.

6. ***Ultramar:*** The figure shown for June 1974 is the Canadian import or purchase price net of the offshore subsidiary's FOB markup, but it is not net of any offshore markup on transportation costs.

7. ***Texaco:*** FOB prices were not available for 1970, 1972 and 1973; the 1974 to 1976 prices are from the PCB. The two sets of figures shown for January, 1976 represent imports of two different types of Nigerian crude oil in that month.

8. ***Sun Third-Party:*** These figures represent arm's length sales and purchase prices for July and August, respectively, between unintegrated petroleum companies and the Sun Group as reported in Exhibit I-383. The API level of the August price for Nigerian Light was assumed to be 37° to 40°.

9. ***Third-Party DOE Rep. Price:*** Representative Price was defined by the United States Department of Energy (DOE) as being the lowest price at which 50 per cent or more (by volume) of arm's length term transactions took place per month. That is, the weighted median price. The DOE only published price data on 34° API Nigerian crude oil for 1973 to 1976 and Bonny Light for 1979. The October 1973 to September 1974 prices were estimated by deducting 10¢ from the DOE maximum price. Because of the definition of the maximum price, this estimate provides an upper limit for the representative price. That is, the actual representative price may be lower.

10. ***Imperial Oil:*** The *asterisked* figure shown for July 1980 is actually for June.

TABLE F-9

Comparative Delivered (CIF) Costs of Imported Nigerian (24.0 – 37.0° API)[1] Crude Oils, 1965-1982
(U.S. $ per barrel, Portland Unless Otherwise Specified)

DATE	GULF		IMPERIAL (Dartmouth)		TEXACO		BP		SHELL		PETROFINA	
	API	Price	API	Price	API	Price	API	Price	API	Price	API	Price
1965	34.0	2.17	—	—	—	—	—	—	—	—	—	—
1966	34.0	2.04	—	—	—	—	33.0	2.27	36.0	2.20	—	—
1967	34.0	2.04	32.6	2.28	—	—	33.0	2.27*	—	—	—	—
1968	35.0	2.06	—	—	—	—	—	—	—	—	—	—
1969	35.0	2.14	—	—	—	—	29.0 24.0	2.08* 2.00*	—	—		—
1970	35.0	2.14	—	—	34.0	2.30	29.0 24.0	2.08 2.00	—	—	—	—
1971			—	—	—	—			—	—	28.9	2.88*
Jan.	35.0	2.47			34.0*	2.80*	29.0 24.0	2.35 2.29				
Mar. 20	35.0	3.09					29.0 24.0	2.99 2.93				
Apr.												
Sept. 10							30.3 24.8	2.99 2.93				
1972			—	—	—	—			—	—	26.9	2.85*
Jan. 1	36.0	3.12					30.3 24.8	2.99 2.93				
Jan. 20	36.0	3.28										
Feb. 15		3.31					30.3	3.155				
July					36.0	3.29						
Sept.	36.0	3.23										

TABLE F-9 (cont'd)

	GULF				TEXACO				BP				MURPHY		ULTRAMAR		PETROFINA	
	Company		PCB		Company		PCB		Company		PCB		Estimated Offshore		PCB		Company	
Date	API	Price	API	Price	API	Price	API	Price	API	Price	API	Price	API	Price	API	Price	API	Price
1973		—	—	—	36.0		—	—	30.3		—	—	—	—	—	—		
Jan.	36.0	3.46				3.49				3.24								
Feb.	"	"																
March	"	"																
April	36.0	3.59				3.62				3.65								
May	"	"																
June	37.3	3.91				3.92				3.79								
July	"	3.99				4.85				3.87								
Aug.	36.8	4.06*				4.94				3.97								
Sept.	"	4.06*								"								
Oct. 1	36.8	6.84				6.66				3.96								
Oct. 20	"					8.92				6.46								
Nov.	36.4	6.90				8.97				"			31.3	6.98*				
Dec.	36.8	7.09				8.94				6.32								
1974	36.2	11.24			34.0				30.3				—	—			31.0	10.65*
Jan.						13.90				11.51- 11.61	31.1	11.62						
Feb.			36.4	10.77														
March			35.7	10.74							30.8	11.60						
April			36.4	10.57		13.80												
May																		
June															40.2	11.50		
July						13.26												
Aug.																		
Sept.											30.8	12.30						
Oct.						12.64			11.85*									
Nov.											30.7	n.a.						
Dec.							31.3	12.47			31.5	12.79						
											25.5	12.71						

TABLE F-9 (cont'd)

	GULF				BP				TEXACO				ULTRAMAR	
	Company		PCB		Company		PCB		Company		PCB		PCB	
Date	API	Price	API	Price	API	Price	API	Price	API	Price	API	Price	API	Price
1975					30.3				36.0					
Jan.	36.0*	n.a.				12.58				12.69				
Feb.	"	"				"	31.0	12.59						
March	"	"			31.0	12.59	30.9	n.a.						
April						12.35				12.60	30.9	12.38		
May						"					31.2	"		
June						12.36	30.1	12.36						
July						12.29				12.22	30.7	12.06		
Aug.						12.13								
Sept.			36.6	12.16		"	30.9	12.13						
Oct.						13.28				13.49				
Nov.			35.5	13.44		12.27	30.9	13.27			31.1	13.03	36.9	13.66
Dec.						12.28	31.3	13.29			31.3	13.15		
1976	36.0*	n.a.			31.0				31.0		37.3	13.71*		
Jan.			30.5	13.60		13.30				13.49	31.0	13.49*		
Feb.			30.6	13.60			30.8	n.a.		"	30.6	13.49		
March			36.9	13.65			31.0	13.30		"				
April							31.1	"		"				
May							30.9	"		"				
June							31.0	13.29		"				
July						13.50				"				
Aug.							30.9	13.49		"				
Sept.										"				
Oct.						13.64				"				
Nov.							30.6	13.63		"				
Dec.							30.5	"		13.49				

TABLE F-9 (cont'd)

	BP			IMPERIAL			GULF		ULTRAMAR		IMPERIAL		BP	
	PCB			PCB			PCB		PCB		PCB		Company	
Date	API	Price	Date	API	Price	Date	API	Price	API	Price	API	Price	API	Price
1977			1979	—	—	1981					—	—		
Jan.	30.7	14.70	Jan.			Jan.								
Feb.			Feb.			Feb.								
March			March			March			34.9	37.39				
April	30.5	14.85	April			Apri.	37.7	41.49						
May			May			May								
June			June			June								
July			July			July								
Aug.			Aug.			Aug.								
Sept.			Sept.			Sept.								
Oct.			Oct.			Oct.								
Nov.			Nov.			Nov.								
Dec.			Dec.			Dec.								
1978	—	—	1980			1982								
Jan.			Jan.			Jan.								
Feb.			Feb.			Feb.								
March			March			March								
April			April			April							43.0	30.40
May			May			May					25.1	34.23		
June			June	29.5	37.51	June								
July			July	25.4*	36.20*	July								
Aug.			Aug.			Aug.								
Sept.			Sept.			Sept.								
Oct.			Oct.			Oct.								
Nov.			Nov.			Nov.								
Dec.			Dec.			Dec.								

Notes to Table F-9 on Comparative Delivered (CIF) Costs of Imported Nigerian (24.0 — 37.0° API) Crude Oils, 1965-1982

General Notes:

1. Since Gulf was the main importer of Nigerian crude oil from 1965 to 1976, the price data for other importers, as well as third-party sources, may be adjusted to reflect the API levels of the Gulf Canada imported Nigerian crude oil. Following international convention, prior to March 20, 1971, 2¢ per barrel per API degree was the adjustment formula used. From March 20, 1971 to 1973, 3¢ per barrel per API degree was used. For 1974, the 6/3¢ formula involved using 6¢ above 34° API and 3¢ below 34° API. For 1975 to 1982, the formula followed was 3¢ per API degree. Although expressed here in cents per degree API, the formulae used from 1971 onwards involved adjustments for variations of one tenth of one degree API.

   The above API adjustment formulae were taken from the various international agreements between OPEC and the petroleum companies. The adjustment formulae followed internally by Gulf, BP and Texaco after March 20, 1971 were found to be too divergent to attempt a comparison on this table. For example, BP from March 20, 1971 to June 30, 1975 indicated that 1¢ per API degree would be used for any variations in API levels (Exhibit I-289, Tab 4). This likely reflected the fact that the tax paid cost of the crude oil to its parent company only varied by approximately 1¢ per API degree over much of that period. On the other hand, Gulf's contracts kept the traditional 2¢ per API degree formula until the end of 1973 (see Exhibit I-380). When BP adopted the 3¢ per degree formula on July 1, 1975, Gulf was using 6¢ per API degree. It is only in 1976 that both companies used the same (i.e. 3¢ per API degree) formula. Texaco used the 1.5¢ formula from 1971 to 1973, the 6/3¢ formula for 1974 and 1975 and the 3¢ formula for 1976. Such wide divergences in adjustment formulae between companies are understandable inasmuch as companies are typically concerned with limited variations (i.e. of less than 2 degrees) in their imported crude oil API levels. Simple inertia to the adoption of new formulae or the need to honor existing contractual relationships may also have resulted in the observed delays in their implementation by individual petroleum companies.

   The API formulae used to make adjustments for variations of at least one tenth of a degree in API levels were generally not found in Canadian petroleum company contracts until several years after their introduction in the Teheran, Tripoli and Lagos agreements of 1971 with OPEC. Gulf in its Exhibit I-16E appears to have retroactively applied the practice to its crude oil prices for 1966 to 1974. The API figures shown for BP are the lower levels of the ranges found in Exhibits I-289, tab 4 and I-314. This range was 0.9 degrees API prior to March 1975 and 0.09 thereafter.

Column Notes:

1. ***Gulf***: See note in Table 8 for the FOB prices and I-16E and I-353 for the transportation costs used for 1966 to 1974. The 1965 price is taken from the Green Book, Volume III, p. 142 which has a CIF Montreal price of $2.29 which becomes $2.17 after subtracting pipeline fees of 12¢. It is unclear as to which API level this price of $2.17 pertains. It is assumed to be 34° because of the reference in I-353. In the notes to Table 8 it was reported that Gulf Canada's extra imports of Nigerian crude oil in 1972, which were to replace supplies of the less costly Ceuta 31° originally intended for the Montreal refinery, were to be at the equivalent Ceuta price of $2.578 FOB or $2.979 CIF Portland. However, as mentioned in Table 8, Gulf Canada's supplier (Gulf Oil Trading Company) reneged on this commitment. The transportation costs found in I-16E do not include costs associated with ocean loss. In 1972 and 1973, (I-361, tab 8, p. 63002) these amounted to 1.62¢ per barrel. For 1975 and 1976, CIF contract prices were not available, but the price reported by the PCB are shown.

2. ***Texaco***: See note to Table 8. No imports were reported at the January 1971 contract price shown.

3. ***BP***: See note in Table 8. The price shown for February 1974 is actually for January 10. The figure for October 1974 is based on an authorized FOB estimate and the January 10th freight rate. In I-314, BP reported a spot purchase of 43° Brass River Nigerian crude oil at a price of $30.40 CIF Portland which included a 5¢ wholesaler fee. No PCB data were reported for this transaction.

4. ***Petrofina***: See note in Table 8. The *asterisked* figures are Canadian purchase or import prices net of the Pannac (i.e., offshore subsidiary) Dividend per barrel.

5. ***Ultramar***: The June 1974 price is the import or Canadian purchase price net of the offshore trader (Ultramar Liberia Ltd.) FOB markup, but is not net of any markups on transportation costs by Golden Eagle Liberia Ltd.

6. ***Murphy***: The November 1973 figure is an estimated offshore price obtained by subtracting the Tepwin offshore subsidiary's net income per barrel of 57.9¢ from the Canadian purchase or import price of $7.556.

7. ***Imperial Oil***: The *asterisked* figure shown for July 1980 is actually for June.

TABLE F-10

Comparative FOB Costs of Imported Kuwait,[1] Iranian Heavy[2] and Arabian Medium[3] (31° – 31.9° API) Crude Oils, 1958-1982
(U.S. $ per barrel)

DATE	SHELL	GULF		BP				PETROFINA		Term Third-Party Price range		Kuwait 31°		Iran H.	Kuwait 31°	Iran H.	Kuwait 31°	Iran Heavy 31°	
																		Posted	
	Kuwait 31°	Kuwait 31°	Iran Heavy 31°	Kuwait API	Kuwait Price	Iran Heavy API	Iran Heavy Price	Kuwait[1]/Iran Heavy[2] API	Price	Kuwait 31°	Iranian Heavy 31°	Official Term	Spot Third-Party	Spot	Tax Paid Cost	Tax Paid Cost	Posted	Abadan	Kharg Is.
1958	1.85	n.a.	n.a.	—	—	—	—	n.a.	n.a.	1.56- 1.86	—	n.a.	n.a.	n.a.	n.a.		1.85	1.80	
1959	1.68	n.a.	n.a.	—	—	—	—	n.a.	n.a.	1.47- 1.59	—	n.a.	n.a.	n.a.	n.a.				
Jan.	1.85																1.85	1.80	
Feb. 13	1.67																1.67	1.62	
1960	1.63		—	—	—	—	—	31.5	1.55*[1]	1.24 1.47	—								
Jan.	1.67											1.64	1.46	n.a.			1.64		
July		1.67								1.28- 1.45							1.67	1.62	
Aug. 1																			
Aug. 9	1.59	1.59								1.24- 1.47									1.67
Aug. 16																	1.59	1.56	
Sept. 14																		1.58	1.63
1961	1.59	1.47	—	—	—	—	—	31.4	0.71*[2]	1.34- 1.59	1.26	1.59	1.41	n.a.	n.a.		1.59	1.58	1.63
1962	1.39	1.47	—	—	—	—	—			1.29- 1.43	—	1.59	1.38	n.a.	n.a.		1.59	1.58	1.63
1963	—	1.47	1.51	—	—	—	—			1.16- 1.44	1.42- 1.48	1.59	1.35	n.a.	n.a.		1.59	1.58	1.63
1964	—	1.47	1.51	—	—	—	—			1.24- 1.45	1.35- 1.48	1.59	1.33	n.a.	n.a.		1.59	1.58	1.63
1965	—	1.34	1.34	—	—	—	—			1.06- 1.45	1.23- 1.47	1.45	1.31	n.a.	n.a.		1.59	1.58	1.63
1966	—	1.34	1.34	n.a.	n.a.	n.a.	n.a.			1.17- 1.43	1.30- 1.44	1.38	1.28	n.a.	n.a.		1.59		1.63
1967	—	1.34	1.34	n.a.	n.a.	n.a.	n.a.			1.05- 1.40	1.28- 1.44	1.35	1.27	n.a.	n.a.	0.91	1.59		1.63
1968	—	1.26	1.31	31.0	1.20*, 1.30*	31.0	1.30*			1.15 1.37	1.20- 1.38	1.32	1.24	1.25- 1.27	0.88	0.92	1.59		1.63
1969	—	1.26	1.31	31.0	1.20*	31.0	1.24	30.9	0.93*[2]	1.15- 1.20	1.20- 1.21	1.30	1.20	1.23- 1.27	0.89	0.94	1.59		1.63

TABLE F-10 (cont'd)

DATE	GULF Kuwait 31°	GULF Iran Heavy 31°	BP Kuwait API	BP Kuwait Price	BP Iran Heavy API	BP Iran Heavy Price	PETROFINA Kuwait[1]/Iran Heavy[2] API	PETROFINA Kuwait[1]/Iran Heavy[2] Price	Nfld. Ref. Co. Kuwait 31°	Term Third-Party Price Range Kuwait	Term Third-Party Price Range Iran Heavy	Kuwait 31° Official Term	Kuwait 31° Spot Third-Party	Kuwait 31° Tax Paid Cost	Iran H Tax Paid Cost	Kuwait 31° Posted	Iran Heavy 31° Posted Kharg Is
1970	1.30	—	31.0	1.20	31.0	1.24	30.6	0.88*[2]		1.15-1.34	1.20-1.25	1.30	1.15				
Jan.	1.26			1.20		1.24				1.15-1.34	n.a.			0.886	0.94	1.59	1.63
April									1.21	"	n.a.						
Nov. 14	1.35								1.342	1.34	1.20-1.25			1.018	1.06	1.68	1.72
1971	—						—	—		1.34-1.68		1.68	1.61				
Jan.		1.43	31.0	1.32	31.0	1.36			1.342	1.34		1.68	1.59	1.018	1.06	1.68	1.72
Feb. 15		1.71		1.596		1.647			1.615	1.62				1.291	1.28	2.085	2.125
March																	
June		1.77		1.661		1.712			1.677	1.68				1.353	1.34	2.187	2.228
July									1.682	1.68		1.68	1.62				
Aug.																	
Sept. 10				1.663													
Oct.																	
Nov.																	
Dec.																	
1972	1.76		31.0		31.0		—	—		1.68-1.80	n.a.	1.80	1.71			2.37	
Jan. 1	1.68	1.77		1.663		1.712			1.682	1.68		1.80	1.65	1.353	1.34	2.187	2.228
Jan. 20	1.773	1.885		1.773		1.872			1.795	1.80				1.466	1.52	2.373	2.417
March																	
June		1.83										1.80	1.77				
July		"							1.80	1.80							
Nov.		"															

TABLE F-10 (cont'd)

	GULF				IRVING				PETROFINA			TEXACO								
	Iranian Heavy/Arab Medium[3]				Iranian Heavy				Iranian Heavy/ Arab Medium[3]			Iranian Heavy 31°		US DOE Third-Party Representative Price			Kuwait 31°		Kuwait	Iran H.
	Gulf Co.		Total		Saint John		Offshore													Posted
Date	API	Price	Leonard	PCB	API	Price	50%	100%	API	Price	PCB	API	Price	Kuwait 31°	Arab Med. 31°	Iran Heavy 31°	Official Term	Spot third-Party	31° Posted	Kharg Is.
1973			—	—	n.a.	2.10*	1.564*	1.03*	30.6	2.58*	—	—	—				2.04	2.07	3.12	
Jan.	31.0	1.99															1.97	1.94	2.48	2.53
Feb.		"																		
March		"																		
April	31.0	2.09															2.10	2.20	2.63	2.67
May		"																		
June																			2.78	2.83
July	31.1	2.21															2.40	2.55	2.83	2.88
Aug.	31.2	2.28																	2.94	2.99
Sept.	"	"																		
Oct. 1	"	"												3.78	n.a.	n.a.	3.50	3.90*	2.88	2.94
Oct. 16		"													n.a.	n.a.			4.90	4.99
Nov.	31.3	3.62												3.78	n.a.	n.a.			4.96	5.05
Dec.														3.70	n.a.	n.a.			4.82	5.01
	Company			PCB					Company		PCB								OGSP	OGSP
1974					n.a.	9.88*	9.22*	8.55*	31.2	9.46*	9.63*[3]	API	PCB				9.44	10.25		
Jan.	31.0	9.57	10.13	9.81					"	9.01*	9.61			9.55	n.a.	n.a.	8.57	11.00*	10.852	10.937
Feb.	"	"	"	9.69					31.0	"	"			9.70	n.a.	n.a.				
March	"	"	"	9.75					"	"	"	31.0	10.49	"	n.a.	n.a.				
April	"	"	"						31.1	"	"			9.75	n.a.	n.a.	9.51	10.00		
May	"	"	"	9.73	—	—	—	—						10.00	n.a.	n.a.				
June	30.9	9.71	10.21	9.75	31.0	9.81	9.15	8.49	30.8	9.01*	9.61			"	n.a.	n.a.			10.95	11.035
July	30.8	9.78		9.72	31.1	9.87	9.20	8.54	30.4	9.09*[3]	9.69[3]			9.75	n.a.	n.a.	9.51	9.80		
		9.70,[3]		9.69,[3]																
Aug.	30.9	9.78	10.36	9.91	—	—	—	—	30.7	9.15*	9.75			9.94	n.a.	n.a.				
Sept.	"	9.78		9.72	32.0	9.85	9.19	8.52						9.95	n.a.	n.a.				
Oct.	"	10.24[3]		10.02[3]	—	—	—	—						10.16	10.19	10.33	10.17	10.20	10.737	10.821
Nov.	"		11.37	11.22	—	—	—	—	31.0	10.07*	10.67			10.46	10.37	10.50			10.365	10.449
				10.50,[3]																
Dec.	"		"	11.22	—	—	—	—	31.1	10.07*	10.67			10.46	10.39	10.54				

TABLE F-10 (cont'd)

	GULF						ULTRAMAR			PETROFINA								OGSP		
	Iranian Heavy			Kuwait/ Arabian Medium[3]			Iranian Heavy			Iranian Heavy			US DOE Third-Party Representative Price			Kuwait 31°				
	Company			Company			PCB			Company										
Date	API	Price	PCB	API	Price	PCB	API	Price	Price	API	Price	PCB	Kuwait 31°	Arab Medium 31°	Iran H 31°	Offi- cial Term	Spot Third- Party	Kuwait 31°	Iranian Heavy 31°	Arab Medium 31°
1975																10.37	10.35			
Jan.				30.3	10.38*	10.37[3]				31.1	10.14*	10.45	10.33	10.38	10.46	10.37	10.35	10.365	10.449	10.380
Feb.	31.1	10.46*	10.46	31.3		10.39							10.34	10.39	"					
March	31.0		"	31.2		10.39							"	10.45	10.45					
April	30.9		"										10.37	10.38	"	10.37	10.35			
May	30.8		"										"	10.44	10.44					
June	30.9		"	30.8		10.38	30.7		10.45				n.a.	10.38	10.45					
July	32.0		10.53										"	10.35	10.42	10.37	10.35			
Aug.													"	"	"					
Sept.	30.9		10.46										"	10.36	"					
Oct.	30.8		n.a.	31.0		10.38							"	11.29	11.41	10.37	10.35	11.30	11.495	11.331
Nov.							30.8		n.a.				"	"	11.45					
Dec.										31.3	11.16*	11.47	"	11.30	11.45					

	GULF						ULTRAMAR			PETROFINA								OGSP		
1976					—	—		(Kuwait) PCB	Iranian Heavy PCB				n.a.			11.26	11.25			
Jan.							31.0	11.53	11.72				"	11.33	11.41	11.30	11.18	11.30	11.495	11.331
Feb.							31.2	(31.4°)	11.65	31.1	n.a.	11.47	"	"	11.36				11.400	
March							31.3		11.62				"	11.30	"					
April													"	11.33	11.35	11.30	11.18			
May										31.0	n.a.	11.40	"	11.31	11.34					
June							30.7	11.51	11.54	30.6	n.a.	11.32	"	11.28	11.30			11.23	11.330	11.280
July								(30.8°)					"	"	11.28	11.23	11.25			
Aug.													"	11.25	11.25					
Sept.	30.8		11.29										"	11.24	11.30					
Oct.	31.0		11.30										"	11.29	"	11.23	11.40			
Nov.	30.9		"										"	11.28	"					
Dec.	31.1		11.41										"	"	11.32					

TABLE F-10 (cont'd)

	GULF				TEXACO		ULTRAMAR						
	Iranian Heavy		Kuwait		Arabian Medium		Iranian Heavy		Kuwait 31°		Official Gov't Selling Price		
Date	API	PCB	API	PCB	API	PCB	API	PCB	Official Adjusted Price	Spot Third-Party	Kuwait 31°	Iran Heavy 31°	Arab Medium 31°
1977									12.37	12.23	12.37	12.49	11.690
Jan.	31.6	12.48			—	—	31.4	12.50	"	12.30			
Feb.									"				
March	31.0	12.47							"				
April	31.2	12.47							"	12.30			
May	30.8	n.a.							"				
June	30.9	12.46					31.1	12.49	"				
July									"	12.20			12.320
Aug.									"				
Sept.	30.7	12.46	31.2	12.28			30.9	12.49	"				
Oct.	30.9	12.46	31.2	12.28			30.8	n.a.	"	12.12			
Nov.	30.7	12.47							"				
Dec.	31.1	12.47					30.8	12.50	"				
1978									12.27	12.26			
Jan.	31.0	12.46*					31.1	12.51	"	12.10	12.27	12.49	12.323
Feb.	31.4	12.47							"				
March	31.1	12.47					31.1	12.48	"				
April	31.1	12.47							"	12.07	12.22		
May	30.9	12.46							"				
June	30.9	12.46					31.0	12.50	"				
July									"	12.13			
Aug.					30.5	12.31			"				
Sept.							30.6	12.48	"				
Oct.							31.0	12.49	"	12.75			
Nov.							30.9	12.49	"				
Dec.									"				

	GULF				TEXACO		PETROFINA		(BP) ULTRAMAR										
	Iranian Heavy		Kuwait		Arabian Medium		Kuwait		Iranian Heavy		Arabian Medium		Kuwait 31°		DOE Third-Party Representative Price		Official Gov't Selling Prices		
Date	API	PCB	API	PCB	API	PCB	API	PCB	API	PCB	API	PCB	Official Adjusted Price	Spot Third-Party	Arab Medium 31°	Kuwait 31°	Kuwait 31°	Iran Heavy 31°	Arab Medium 31°
1979																			
Jan.			31.1	12.86									13.08	16.90	13.03	12.79	12.83	13.060	12.886
Feb.			33.0	12.85											13.08	12.77	14.03*		
March															13.04	13.96			
April	31.3	16.07							31.5	16.06			16.29	25.70	14.05	15.72	15.80	16.040	14.052
May	31.1	16.06	31.5	15.82											"	16.27	16.40*	16.640*	
June			31.2	19.01	30.5	17.53									17.54	19.00	19.00**	17.740	17.547
July	30.0	19.93					31.1	19.56	31.1	19.91	30.1	17.53	18.96	29.80	17.55	19.49	19.49	19.900	
Aug.															17.54	"			
Sept.	30.7	20.25	31.0	19.66	30.2	17.56	31.0	20.35	(30.4)	(20.30)					17.45	"			
Oct.	30.8	23.01											23.32	34.50	17.44	29.84	21.43	22.980	
Nov.	31.1	23.01			31.1	23.55									23.54	25.50	25.50		23.547
Dec.					31.3	23.52									23.55	25.50		27.98	
										Irving-Arab Medium									
										Saint John		Offshore							
1980	—	—					—	—		API	Price				n.a.	n.a.			
Jan.			31.6	27.53									27.90	33.75			27.50	29.64	25.454
Feb.					31.6	25.46													
March			31.4	27.52	31.5	25.47													
April			31.1	27.51									29.22	33.88				34.37	27.454
May					30.5	27.44											29.50		
June			31.1	29.51	31.0	27.43													
July													30.81	32.08			31.50		
Aug.																			29.454
Sept.																			
Oct.																			
Nov.			32.2	31.70	30.9	31.45				31.1	31.49	n.a.							31.454
Dec.					30.9	31.45													

TABLE F-10 (cont'd)

	GULF		TEXACO		IRVING			PETROFINA				
					Arab Medium					Official Govt't Selling Prices		
	Kuwait		Arab Medium		Saint John		Offshore	Arab Medium				
Date	API	PCB	API	PCB	API	Price		API	PCB	Kuwait 31°	Iran Heavy 31°	Arab Medium 31°
1981												
Jan.					—	—	—			35.50	36.00	31.454
Feb.			31.0	31.45	"	"	"					
March	30.9	35.56			"	"	"					
April					"	"	"					
May					"	"	"					
June	30.8	35.57			"	"	"					
July			31.0	31.45	"	"	"					
Aug.					"	"	"	30.2	31.16			
Sept.					"	"	"					
Oct.					"	"	"					33.00
Nov.					"	"	"			33.00	33.40	
Dec.			31.3	33.01	30.9	32.99	n.a.					
1982	—	—	—	—	n.a.	n.a.	n.a.	—	—			
Jan.	"	"	"	"	"	"	"	"	"	32.30	32.30	32.40
Feb.	"	"	"	"	"	"	"	"	"		31.30*	
March	"	"	"	"	"	"	"	"	"		30.30*	
April	"	"	"	"	"	"	"	"	"		28.30*	
May	"	"	"	"	"	"	"	"	"			
June	n.a.	n.a.	n.a.	n.a.	"	"	"	n.a.	n.a.			
July	"	"	"	"	"	"	"	"	"	32.30	29.30	32.40
Aug.	"	"	"	"	"	"	"	"	"			
Sept.	"	"	"	"	"	"	"	"	"			
Oct.	"	"	"	"	"	"	"	"	"			
Nov.	"	"	"	"	"	"	"	"	"			
Dec.	"	"	"	"	"	"	"	"	"			

Notes to Table F-10 on Comparative FOB Costs of Imported Kuwait, Iranian Heavy and Arabian Medium (31 — 31,9° API) Crude Oils, 1958 — 1982

General Notes:

1,2,3. Data for Kuwait, Iranian Heavy and Arabian Medium crude oil are identified in the body of the table by the numbers 1, 2 and 3, respectively whenever more than one of these crude oils is listed in any column. The Kuwait and Arabian Medium crude oils are less valuable than Iranian Heavy crude oil because of their relatively higher sulphur content (2.5 and 2.4 versus 1.66 per cent). Until late 1973, Iranian Heavy generally was priced four to five cents higher. After late 1973, the differentials widened and varied considerably. Both Kuwait and Arabian Medium were posted at the same price until 1974 when a differential of 2 to 5 cents in favour of Arabian Medium developed between their respective Official Government Selling Prices. From early 1979 to October 1981 Kuwait was priced significantly higher than Arabian Medium. Thereafter a premium of 10 cents in favour of Arabian Medium was observed.

Column Notes:

1. ***Shell***: For 1958 to 1962, Shell's contract price was set at the posted price; the annual prices represent the average annual price paid for imported crude per year.

2. ***Gulf***: (a) ***Kuwait***: Contract prices are shown for 1960, 1961 and 1964 (irrespective of I-353 which only reported the prices shown for 1962 and 1965) because I-360, tab 1, shows imports occurred in those years. The contract price in 1960 was the posted price (see I-16E, #19). In 1961 to 1967, it was the posted price minus 12¢. The 1968 to 1970 prices are based on information in I-357, tab 3, pp. 65544 and 65448 which showed that the discount off posted price was 33¢ during that period. The average annual price for 1970 is from I-16E. The 1972 prices are from I-361, tab 8, p. 63004. Prices reported by the PCB are shown in 1975, 1977 and 1979 to 1981. (b) ***Iranian Heavy***: The contract price for 1964 (at posted price Kharg Island minus 12¢) is shown because of I-360, tab 1 information on imports. The 1963 and 1965 prices are found in I-353. The 1966 to 1967 prices are based on the contract price of 31° posted minus 12¢ rather than the I-16E prices of imports at varying API levels within each year. The 1968 to 1969 prices, as in the case of Kuwait above, are based on information in I-357, tab 3, pp. 65544 and 65448 which indicated that the contract price was 32¢ off the posted 31° price. The 1971 to January 1972 prices are from I-380, tabs 18, 23, 26 and 35. The June to November price is an average price for that period from I-16E. It reflects an arrangement (see I-361, tab 8, p. 62997) whereby mixed cargoes of Kuwait and Iranian Heavy were to be priced as if the proportion of Kuwait in the blend was a minimum 25 per cent. (At the prices in effect on January 20, 1972, the weighted average price would be $1.857). The price of $1.83 reported indicates that the proportion of Kuwait in the blend was about 50 per cent. The January and April 1973 prices, are from I-355, tab 10, p. 63740. The remaining 1973 and the 1974 prices are from I-16E. The Total Leonard prices shown for 1974 were part of a swap arrangement whereby Gulf Canada purchased Iranian Heavy while Total Leonard purchased Canadian crude oil from Gulf Canada (see I-380, tabs 44 and 45). The prices reported by the PCB also are shown for 1974 and 1975 to 1979. The *asterisked* figures for 1975 and for January 1978 are contract prices from I-380, tabs 50 and 62. (c) ***Arabian Medium***: Two sets of prices are shown in 1974. The first set for August and October are from I-16E and were for imports at 30.3° and 30.9° API. The second set are prices reported by the PCB in August, October and December for imports at 30.3°, 30.9° and 30.5° API. The January 1975 price was also reported by the PCB for imports at 30.3° API.

Column Notes:

3. ***BP***: The figures shown for 1968 were taken from I-293, p. 11176 which contains estimates of the Kuwait and Iranian Heavy prices based on BP Trading's tender prices in February of $1.20 and $1.30, respectively. The price of $1.30 also shown for Kuwait in 1968 was taken from Book 22, Tab 481, p. 9322 (see International Sector, B Documents filed by the Director) which contains an estimate of CIF and FOB prices dated July 11, 1968, from which freight costs of 60¢ were derived. The CIF values for Kuwait and Iranian Heavy in Table 11 were calculated using this freight cost figure. The 1969 to February 14, 1971 prices for both Kuwait and Iranian Heavy are contract prices for 31.0 to 31.9° API ranges as reported in I-289, tab 4. On February 15, 1971, the contract API ranges and prices changed to 30.3° to 31.2° for Iranian Heavy and 31.4° to 32.3° for Kuwait, the Kuwait range subsequently changed to 31.2° to 32.1° on September 10, 1971. The prices shown for February 15, 1971 onwards were converted to 31° using 1¢ per API degree used by BP. This conversion was carried out for variations of tenths of a degree off the standard 31° API level for both crude oils, even though the BP contract price sheets only called for changes in price when the variations in API levels were one full degree or more from the contract API range points in order to standardize adjustments across companies. The August 1979 price was reported by the PCB and is shown in parentheses under the Ultramar column.

4. ***Petrofina***: The *asterisked* figures shown for 1960, 1961, 1969, 1970 and 1973 to 1975 are Canadian purchase or import prices (or monthly PCB prices for 1974 to 1975) net of the Pannac (i.e., offshore subsidiary) Dividend Per Barrel. Two sets of monthly PCB figures are shown for 1974 and 1975 because of Petrofina's assertion in Exhibit I-324, Tab 8, p. 194880 that it reported net offshore prices under the Oil Import Compensation Program. It is unclear, however, whether Petrofina discontinued this practice in late 1974 or 1975 at the urging of the Energy Supplies Allocation Board which was administering the Program (see Exhibit I-324, Tab 8, p. 194880). Accordingly, both sets of prices — adjusted (the first set) and unadjusted (the second set) — are reported.

5. ***Term Third-Party Price Range***: The figures shown represent the minimum and maximum prices reported in surveys conducted by Adelman (see Exhibit I-51A, Tab 11-4 and pp. 186, 417-421 of ***The World Petroleum Market***) and Newton (see Exhibit I-51A, Tab 11-5). The Adelman price data for Kuwait had been standardized with Iranian Heavy by adding 5¢ to allow for the sulphur content differential. The process was reversed to generate the price data used in this table. The Adelman data were corrected for rounding errors whenever stated discounts off posted prices were indicated. The lowest Kuwait prices for 1960 and 1963 were not used because of the reasons cited by Adelman in ***W.P.M.***, pp. 386 to 387. The Blair data reported for Kuwait 24° to 26° prices on p. 75 of the Newton exhibit were not used. However a price for Kuwait ($1.15) reported by Shell to the U.S. Government for December 1968 was used because it was for long term contracts involving large purchases (see p. 173 of Newton exhibit reference). The 1966 to 1967 prices ($1.18 to $1.23) quoted by Adelman for Iranian Heavy (page 186) were not used as these are obviously based on the prices of other crude oils, that is, they are price equivalents not actual prices. For 1970 to 1972, the prices calculated for the Newfoundland Refining Company contract with BP Trading are also used.

6. ***Official Term/Official Adjusted Price/Official Government Selling Price (OGSP)***: Official term prices represent the long term contract prices under which the bulk of crude oil was sold until 1975 when producing country governments began to sell significant quantities of their nationalized crude oil at official government selling prices. From 1975 onwards, official adjusted price figures include any discounts or premiums concerning official government selling prices which were applicable to all buyers. The Iranian Heavy OGSP figure for May 1979 is actually for May 15. The Kuwait OGSP figures for February and May 1979 are for February 20 and May 15. The Kuwait June 1979 figure consists of the reported OGSP price plus the $2.60 surcharge imposed for that month. The Iranian heavy OGSP figures shown for February to March 1982 are actually for February 5, 12 and 21.

Notes to Table F-10 on Comparative FOB Costs of Imported Kuwait, Iranian Heavy and Arabian Medium (31 – 31.9° API) Crude Oils, 1958 – 1982 (cont'd)

Column Notes:

7. *Spot Third-Party Prices*: The spot prices are for single cargo purchases and were taken from I-18 and I-23 for Kuwait and from Adelman (*W.P.M.*, pp. 417 to 421) for Iranian Heavy. The *asterisked* prices for Kuwait in the fourth quarter of 1973 and the first quarter of 1974 were reported to have been only observed for a very small number of transactions.

8. *Iranian Heavy Posted Price*: Two sets of figures are shown until 1965 when Kharg Island took over as the main export terminal from Abadan.

9. *Newfoundland Refining Company*: The Kuwait prices shown for 1970 to 1972 reflect the April, 1970 market price of $1.21 negotiated with B.P. Trading (see Exhibit I-299); with escalations based on tax paid cost increases, as well as, increases of 0.5 cents every July 1st commencing in 1971. The 1973 and 1974 prices are not shown because it was not possible to obtain information on the effect which partial nationalization (i.e. participation) would have had on these contract prices.

10. *Irving*: The Iranian Heavy annual (*asterisked*) Saint John or Canadian import prices for 1973 and 1974 are from Exhibit I-394 while the monthly 1974 Iranian Heavy prices and the 1980/1981 Arabian Medium prices are from Exhibits I-265, I-266, I-267 and I-268. Net offshore 100% and 50% prices were calculated for 1973 and 1974 by deducting the net income (or half the net income) per barrel of the offshore subsidiary (Bomag-Irvoil). See Appendix E for further details. No net offshore prices were calculated for 1980/1981 because net income per barrel figures were not available.

11. *US DOE Third-Party Representative Price*: The representative price was defined by the United States Department of Energy (DOE) as being the lowest price at which fifty per cent (by volume) of arm's length transactions took place. That is the weighted median price. For October 1973 to September 1975, the representative price figure for Kuwait is an estimate based on the DOE maximum price minus 10¢ per barrel. Because of the definition of the maximum price (see note to Table 3) these estimates provide the maximum value that the representative price would have been in those months.

TABLE F-11

Comparative Delivered (CIF) Costs of Imported Kuwait,[1] Iranian Heavy[2] and Arabian Medium[3] (31° — 31.9° API)
Crude Oils, 1958 — 1982
(U.S. $ per barrel, Portland, Unless Otherwise Specified)

DATE	SHELL	GULF		BP				PETROFINA		THIRD-PARTY PRICE RANGES			
										Term		Spot	
	Kuwait 31°	Kuwait 31°	Iran Heavy 31°	Kuwait API	Kuwait Price	Iran Heavy API	Iran Heavy Price	Kuwait[1] API	/Iran Heavy[2] Price	Kuwait 31°	Iranian Heavy 31°	Kuwait 31°	Iranian Heavy 31°
1958	2.84	n.a.	n.a.	—	—	—	—	n.a.	n.a.	2.48-2.78*	n.a.	n.a.	
1959	2.66*	n.a.	n.a.	—	—	—	—	n.a.	n.a.	2.39-2.51	n.a.	n.a.	
Jan.	2.83												
Feb. 13	2.65												
1960	2.61*	2.54	—	—	—	—	—	31.5	2.33*1	1.93-2.17	n.a.	2.16	n.a.
Jan.	2.65									1.98-2.15			
July										1.93-2.17			
Aug. 9	2.57												
Sept 14													
1961	2.57	2.40*	—	—	—	—	—	31.4	1.55*2	2.04-2.29	1.95	2.08	n.a.
1962	2.57	2.40	—	—	—	—	—			1.96-2.10	n.a.	2.13	n.a.
1963	—	2.23	2.59	—	—	—	—			1.83-2.15	2.09-2.19	2.17-2.24	n.a.
1964	—	2.22	2.57	—	—	—	—			1.82-2.03	1.93-2.06	2.14	n.a.
1965	—	1.99	2.08	—	—	—	—			1.64-2.15	1.81-2.17	2.07	n.a.

TABLE F-11 (cont'd)

DATE	SHELL	GULF		BP				PETROFINA		THIRD-PARTY PRICE RANGES			
										Term		Spot	
	Kuwait 31°	Kuwait 31°	Iran Heavy 31°	Kuwait API	Kuwait Price	Iran Heavy API	Iran Heavy Price	Kuwait[1] API	/Iran Heavy[2] Price	Kuwait 31°	Iranian Heavy 31°	Kuwait 31°	Iranian Heavy 31°
1966	—	1.99	1.99	n.a.	n.a.	31.0	1.92			1.74-2.13	1.87-2.14	1.96	n.a.
1967												2.61- 2.79	
Jan.	—	1.98	2.14	n.a.	n.a.	n.a.	n.a.			1.59-2.13	1.83-2.17	1.90	n.a.
July										1.91-2.28	2.14-2.32	3.68	n.a.
1968	—	1.92	1.97	31.0	1.80*, 1.90*	31.0	1.90*			1.67-2.14	1.73-2.15	2.53- 2.55	2.55- 2.56
1969	—	1.99	2.12	31.0	1.87*	31.0	1.90	30.9	1.96*[2]	1.77-1.92	1.82-1.95	2.22- 2.53	2.25- 2.60

TABLE F-11 (cont'd)

DATE	BP				GULF				PETROFINA		THIRD-PARTY PRICE RANGES			
					Kuwait 31°		Iranian Heavy 31°				Term		Spot	
	Kuwait		Iran Heavy											
	API	Price	API	Price	Portland	Pt. Tupper	Portland	Pt. Tupper	Kuwait[1]/ API	Iran H.[2] Price	Kuwait	Iran Heavy	Kuwait	Iran Heavy
1970	31.0	1.87	31.0	1.90	2.21	—	—	—	30.6	1.95*[2]	2.43-2.62		3.57-3.59	n.a.
Jan.		1.87		1.90	2.17						1.84-2.15	n.a.	2.76	
April												n.a.		
June													4.18	
July											2.64-2.98	2.50-2.89		
Nov. 14					2.26									
1971					—	—	—	2.38	—	—	2.58-2.92	n.a.	2.82	n.a.
Jan.	31.0	2.36	31.0	2.40				2.04			2.81-3.09		3.07	
Feb. 14		2.636		2.687				2.32						
				2.752										
March														
June		2.701						2.38						
July											2.74		2.56	
Aug.														
Sept. 10		2.703												
Nov.														
Dec.														
1972	31.0		31.0		2.59(2.54)	2.41		2.48	—	—	2.65-2.77	n.a.	2.78	n.a.
Jan. 1		2.703		2.752	2.51(2.44)	2.31	2.60(2.53)	2.40			2.65-2.76		2.46	
Jan. 20		2.813		2.852	2.61(2.54)	2.41	2.72(2.65)	2.52						
Feb. 15					(2.56)	2.43	(2.67)	2.54						
March							2.66(2.62)	2.49						
June														
July											2.78	3.10		
Nov.														

TABLE F-11 (cont'd)

	TEXACO		GULF				IRVING				PETROFINA			THIRD-PARTY PRICE RANGES 31°			
	Iranian Heavy		Iranian Heavy/Arab Medium[3]				Iranian Heavy				Iranian Heavy/Arab Medium[3]						
			Gulf Co.		Total Leonard			Saint John	Offshore		Company			Term			Spot
Date	API	PCB	API	Price		PCB	API	Price	50%	100%	API	Price	PCB	Kuwait	Iran Heavy	Arab Medium	Kuwait
1973					—	—	n.a.	3.10	2.56	2.03	30.6	4.28*	—		n.a.	n.a.	5.20
Jan.			31.0	2.70										n.a.			5.07
Feb.				"													
March				"													
April			31.0	2.80													5.33
May				"													
June																	
July			31.1	2.94													5.69
Aug.			31.2	3.01													
Sept.			"	"													
Oct. 1			"	"										5.51			7.05
Oct. 16				"													
Nov.			31.3	4.35										5.51			
Dec.														5.43			
1974							n.a.	11.89	11.23	10.56	31.2	11.10*	11.18*[3]				12.40
Jan.			31.0	10.71	11.27	10.87					"	10.73	11.33	11.55	n.a.	n.a.	13.15
Feb.			"	"	"	10.77					31.0	10.54	11.14	11.70			
March	31.0	13.37	"	"	"	10.81					"	10.51	11.11	11.70			
April			"	"	"						31.1	10.52	11.12	11.75			12.14
May			"	"	"	10.88	—	—	—				—	12.00			
June			30.9	10.85	11.35	10.89	31.0	11.84	11.18	10.51	30.8	10.51	11.11	12.00			
July			30.8	10.92		10.88	31.1	11.91	11.25	10.59	30.4	10.46*[3]	11.06*[3]	11.75			11.94
				10.84[3]		10.82,[3]											
Aug.			30.9	10.92	11.50	11.03	—	—	—		30.7	10.55	11.15	11.94			
Sept.			"	10.92		10.82	32.0	11.84	11.18	10.51				11.95			
Oct.			"	11.38[3]		11.12[3]	—	—	—					12.16	12.34	12.19	12.35
Nov.			"		12.51	12.28	—	—	—		31.0	11.42	12.02	12.47	12.51	12.38	
						11.60,[3]											
Dec.			"		"	12.32	—	—	—		31.1	11.44	12.04	12.47	12.55	12.40	

TABLE F-11 (cont'd)

Date	GULF Iranian Heavy API	GULF Iranian Heavy PCB	GULF Kuwait/³ Arabian Medium API	GULF Kuwait/³ Arabian Medium PCB	ULTRAMAR Iranian Heavy API	ULTRAMAR Iranian Heavy PCB	PETROFINA Iranian Heavy API	PETROFINA Iranian Heavy Price	PETROFINA Iranian Heavy PCB	Third-Party Price Range 31° Term Kuwait	Third-Party Price Range 31° Term Arab Medium	Third-Party Price Range 31° Term Iranian Heavy	Third-Party Price Range 31° Spot Kuwait	Third-Party Price Range 31° Spot Arab Medium	Third-Party Price Range 31° Spot Iranian Heavy
1975										n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Jan.			30.3	11.49³			31.1	11.44*	11.75						
Feb.	31.1	11.60													
March	31.0	11.65	31.3	11.58											
April	30.9	11.66	31.2	11.59											
May	30.8	11.63													
June	30.9	11.65	30.8	11.57	30.7	12.38									
July	32.0	11.69													
Aug.															
Sept.	30.9	11.70	31.0	11.63											
Oct.	30.8	n.a.													
Nov.					30.8	n.a.									
Dec.							31.3	12.40*	12.71						

Date	GULF Iranian Heavy API	GULF Iranian Heavy PCB	GULF Kuwait/³ Arabian Medium API	GULF Kuwait/³ Arabian Medium PCB	ULTRAMAR	ULTRAMAR (Kuwait) PCB	ULTRAMAR Iran H. PCB	PETROFINA Iranian Heavy API	PETROFINA Iranian Heavy Price	PETROFINA Iranian Heavy PCB	Third-Party Price Range 31° Term Kuwait	Third-Party Price Range 31° Term Arab Medium	Third-Party Price Range 31° Term Iranian Heavy	Third-Party Price Range 31° Spot Kuwait	Third-Party Price Range 31° Spot Arab Medium	Third-Party Price Range 31° Spot Iranian Heavy
1976			—	—										12.30	n.a.	n.a.
Jan.					31.0	13.23	13.46				n.a.	12.39	12.47	12.23		
Feb.					31.2	(31.4*)	13.32	31.1	n.a.	12.81		"	12.42			
March					31.3		13.31					12.36	"			
April												12.39	12.41	12.23		
May								31.0	n.a.	12.57		12.37	12.40			
June					30.7	13.21	13.23	30.6	n.a.	12.47		12.34	12.36			
July						(30.8*)						"	12.34	12.30		
Aug.												12.31	12.31			
Sept.	30.8	12.24										12.30	12.36			
Oct.	31.0	12.25										12.35	"	12.45		
Nov.	30.9	12.26										12.34	"			
Dec.	31.1	12.28										"	12.38			

TABLE F-11 (cont'd)

	GULF				TEXACO		ULTRAMAR							
									Third-Party Price Range 31°					
	Iranian Heavy		Kuwait		Arabian Medium		Iranian Heavy		Term			Spot		
Date	API	PCB	API	PCB	API	PCB	API	PCB	Kuwait	Arab Medium	Iranian Heavy	Kuwait	Arab Medium	Iranian Heavy
1977					—	—	31.4	14.44				13.56	n.a.	n.a.
Jan.	31.6	13.37							13.72	13.04	13.84	13.64		
Feb.									"		"			
March	31.0	13.37							"		"			
April	31.2	13.43							"		"	13.64		
May	30.8	n.a.							"		"			
June	30.9	13.36					31.1	14.47	"		"			
July									"	13.67	"	13.53		
Aug.									"		"			
Sept.	30.7	13.36	31.2	13.21			30.9	14.47	"		"			
Oct.	30.9	13.37	31.2	13.21			30.8	n.a.	"		"	13.45		
Nov.	30.7	13.54*							"		"			
Dec.	31.1	13.56					30.8	14.40	"		"			
1978			—	—					n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Jan.							31.1	14.24						
Feb.	31.4	13.29												
March	31.1	13.29					31.1	14.29						
April	31.1	13.29												
May	30.9	13.28												
June	30.9	13.34					31.0	14.16						
July														
Aug.					30.5	13.65								
Sept.							30.6	14.12						
Oct.							31.0	14.13						
Nov.							30.9	14.36						
Dec.														

TABLE F-11 (cont'd)

	GULF				TEXACO		IRVING			PETROFINA		ULTRAMAR				BP
							Arabian Medium									
	Iranian Heavy		Kuwait		Arabian Medium		Saint John			Kuwait		Iranian Heavy		Arabian Medium		Iranian Heavy
Date	API	PCB	API	PCB	API	PCB	API	Price	Offshore	API	PCB	API	PCB	API	PCB	PCB
1979																30.4*
Jan.			31.1	13.77												
Feb.			33.0	13.77												
March																
April	31.3	17.06										31.5	17.80			
May	31.1	17.12	31.5	16.89												
June			31.2	20.28	30.5	19.27										
July	30.0	21.20								31.1	21.36	31.1	20.61	30.1	19.41	
Aug.																22.47
Sept.	30.7	21.52	31.0	20.93	30.2	19.30				31.0	21.38					
Oct.	30.8	24.31														
Nov.	31.1	24.39			31.1	25.13										
Dec.					31.3	26.21										
1980	—	—								—	—	—	—	—	—	
Jan.			31.6	28.97												
Feb.					31.6	27.48										
March			31.4	28.91	31.5	27.59										
April			31.1	28.90												
May					30.5	29.33										
June			31.1	31.14	31.0	29.37										
July																
Aug.																
Sept.																
Oct.																
Nov.			32.2	33.57	30.9	33.54	31.1	33.33	n.a.							
Dec.					30.9	33.76										

TABLE F-11 (cont'd)

	GULF		IRVING			TEXACO		PETROFINA	
			Arabian Medium						
	Kuwait		Saint John			Arabian Medium		Arabian Medium	
Date	API	PCB	API	Price	Offshore	API	PCB	API	PCB
1981			—	—	—				
Jan.			"	"	"				
Feb.			"	"	"				
March	30.9	37.83	"	"	"	31.0	33.71		
April			"	"	"				
May			"	"	"				
June	30.8	37.55	"	"	"				
July			"	"	"				
Aug.			"	"	"	31.0	33.64		
Sept.			"	"	"			30.2	33.14
Oct.			"	"	"				
Nov.			"	"	"				
Dec.			30.9	35.06	n.a.	31.3	34.93		
1982	—	—	n.a.	n.a.	n.a.	—	—	—	—
Jan.	"	"	"	"	"	"	"	"	"
Feb.	"	"	"	"	"	"	"	"	"
March	"	"	"	"	"	"	"	"	"
April	"	"	"	"	"	"	"	"	"
May	"	"	"	"	"	"	"	"	"
June	n.a.	n.a.	"	"	"	"	"	"	"
July	"	"	"	"	"	n.a.	n.a.	n.a.	n.a.
Aug.	"	"	"	"	"	"	"	"	"
Sept.	"	"	"	"	"	"	"	"	"
Oct.	"	"	"	"	"	"	"	"	"
Nov.	"	"	"	"	"	"	"	"	"
Dec.	"	"	"	"	"	"	"	"	"

Notes to Table F-11 on Comparative Delivered (CIF) Costs of Imported Kuwait, Iranian Heavy and Arabian Medium (31° — 31.9° API) Crude Oils, 1958-1982

General Notes:

1,2,3. Data for Kuwait, Iranian Heavy and Arabian Medium crude oil are identified in the body of the table by the numbers 1, 2 and 3, respectively whenever more than one of these crude oils is listed in any column.

The Kuwait and Arabian Medium crude oils are less valuable than Iranian Heavy crude oil because of their relatively higher sulphur content (2.5 and 2.4 versus 1.66 per cent). Until late 1973, Iranian Heavy generally was priced 4 to 5¢ higher. After late 1973, the differentials widened and varied considerably. Both Kuwait and Arabian Medium were posted at the same price until 1974 when a differential of 2 to 5¢ in favor of Arabian Medium developed between their respective Official Government Selling Prices. From early 1979 to October 1981 Kuwait was priced significantly higher than Arabian Medium. Thereafter a premium of 10¢ in favor of Arabian Medium was observed.

Column Notes:

1. ***Shell:*** For 1959 to 1962, the CIF figures shown are based on contract FOB prices which were set at the posted price and/or average annual prices found in I-16F plus the contract fee of 98¢ for ocean loss, transportation costs and insurance.

2. ***Gulf:*** (a) *Kuwait:* The 1960, 1962 to 1970 and 1972 average annual delivered prices are taken from the Green Book, Vol. III, p. 142 which shows CIF Montreal prices from which CIF Portland prices were derived by subtracting the pipeline fees shown in I-161. For 1961, the 1962 transportation costs were used to calculate CIF prices since the FOB prices were identical and imports were reported in I-360, tab 1. For 1966 to 1970, the sum of the FOB prices in Table 10 and the transportation costs reported in I-16E yield delivered prices slightly lower than those shown because they do not include an allowance for ocean loss. The January and November 1970 prices are based on FOB transportation cost totals to which 2¢ were added for ocean loss. The 1972 prices are for (i) shipments directly to Portland, (ii) shipments to Portland via Pt. Tupper (as shown in parentheses) and (iii) shipments to Pt. Tupper. The February 15th price increase reflects a pollution levy of 2.3¢ imposed at that time on Very Large Crude Oil Carriers (VLCC's) (see I-361, tab 1, p. 79857; tab 6, pp. 65320 to 65321 and tab 8 pp. 63002 and 63004). The average annual price for shipments to Portland is based on the average FOB price in I-16E and the implicit transportation costs found in I-361. The 1975, 1977 and 1979 to 1981 prices are those reported by the PCB. It is unclear whether these concern shipments to both Portland and Pt. Tupper or to only one of these landing ports. (b) Iranian Heavy: The 1963 to 1969 average annual prices are based on CIF Montreal prices reported in the Green Book, Vol. III, p. 142 from which pipeline fees have been deducted. The 1971 and 1972 average annual CIF Pt. Tupper prices also came from this source. As noted above for Kuwait, the combination of FOB prices from Table 10 and transportation costs reported in I-16E yields lower 1966 to 1969 CIF prices due to the exclusion of ocean loss costs. The 1971 prices are based on the FOB prices in Table 10 and the freight costs of 61.4¢ reported in the Green Book, Vol. III, p. 134. The 1972 prices are for (i) shipments directly to Portland, (ii) shipments to Portland via Pt. Tupper (as shown in parentheses) and (iii) shipments to Pt. Tupper. See explanation and sources cited for Kuwait above. The 1973 and 1974 prices are obtained by using the FOB prices in Table 10 and the freight costs of 73¢ and $1.14 as reported in the Green Book, Vol. III, p. 134. The 1974 prices also include the sum of FOB prices and freight costs reported by the PCB; other information reported by the PCB are shown for 1975 to 1979. It is unclear as to which port or ports the PCB data relate to. The November 1977 figure represents the CIF Portland price for a spot cargo (see I-380, tab 61). (c) Arabian Medium: For 1974, the first set of CIF prices use the FOB prices for August and October in Table 10 with the freight cost used for Iranian Heavy ($1.14). The second set of 1974 prices are those reported by the PCB. The 1975 price is from the PCB records.

3. ***BP:*** See note to Table 10. The 1966 price was taken from I-289, tab 2 which gave the CIF contract price for Iranian Heavy as 28¢ off the Qatar base price of $2.20 CIF.

4. ***Petrofina:*** The *asterisked* figures for 1960, 1961, 1969, 1970 and 1973 to 1975 are net of the Pannac (i.e., offshore subsidiary) dividend per barrel. Two sets of monthly PCB figures — adjusted and unadjusted — are shown for 1974 and 1975 because it is unclear when Petrofina discontinued its practice of reporting net offshore prices under the Oil Import Compensation Program (see Exhibit I-324, Tab 8 at page 194880). That is, the first set of PCB figures shown for these years have also been reduced by the Pannac dividend per barrel.

5. ***Third-Party Price Ranges:*** See Table 10 for the Term and Spot FOB price data used for 1958 to 1971. For the 1976 term prices, DOE representative prices were used. In 1977, the OGSP prices were used for the term prices. The Spot Price Range for 1968 and 1969 are based on spot FOB prices reported by Adelman in W.P.M. See Appendix E for the transportation costs used. Insurance, at 1 per cent of the delivered price was added.

6. ***Irving:*** See note on Table 10.

TABLE F-12

Comparative FOB Costs of Imported Venezuelan Light and Trinidadian (30.0 – 34.0° API)[1] Crude Oils, 1958 to 1982
(U.S. $ per barrel ex La Salina or equivalent ports)[2]

DATE	TEXACO			IMPERIAL OIL				SHELL				GULF		
	Mata 30°	Lago-medio (Lama) 32°	Guanipa (Trini-dad) 30°	Guanipa 30°	T.J. Light 31°	Ceuta 31°	Oficina 34° to 1963, Mesa 33° to 1971	Avg. Vene-zuelan 33°	Mesa 30°	Lago-treco 31°	Lagomar 32°	Ceuta 31°	Mesa 30° 1961 33° 1965	East Vene-zuelan 34°
1958	2.84		(2.63)	n.a.	2.77*	n.a.	2.98	2.76	—	—	—	n.a.	n.a.	3.24
Jan.	2.85	2.79	2.75											
Nov. 15	2.75													
1959	2.54		(2.38)		2.44*	n.a.		2.56	—	—	—	n.a.	n.a.	3.12
Jan.	2.75	2.73	2.75	2.60	2.62*		2.85							
Feb. 13	2.60			2.42	2.44*									
Apr. 4	2.50		2.50	2.42	2.44*									
July							2.45							
1960		2.44	(2.43)			n.a.		2.38	2.50	2.37	—	—	n.a.	3.12
Jan.	2.40			2.42	2.44*		2.38							
April				2.35	2.27*									
July							2.33							
Aug. 9				2.25	2.17*									
1961	2.40	2.44	(2.43)	2.25	2.17*	n.a.	2.33	2.10	2.50	2.37	—	2.30*	2.27	2.50
March			2.25						2.17	2.11				
April								30°						
1962	2.34	2.38				2.17	2.33	2.09	2.17	2.11		—	n.a.	
Jan.	2.40			2.25	2.17*						2.11*			
April											2.06*			2.31
May		2.44			2.17									
Aug.	2.25	2.29	2.25											

TABLE F-12 (cont'd)

DATE	TEXACO			IMPERIAL OIL				SHELL					GULF	
	Mata 30°	Lago-medio (Lama) 32°	Guanipa (Trini-dad) 30°	Guanipa 30°	T.J. Light 31°	Ceuta 31°	Oficina 34° to 1963, Mesa 33° to 1971	Avg. Vene-zuelan 33°	Mesa 30°	Lago-treco 31°	Lagomar 32°	Ceuta 31°	Mesa 30° 1961 33° 1965	East Vene-zuelan 34°
1963			—			2.17		2.09	2.17			—	n.a.	2.18
Jan.	2.25	2.29		2.23	2.15		2.33			2.11				
July							2.28							
Nov.							Mesa 33°		2.10	2.00	2.11,2.08*			
1964	2.23	2.23*	—	2.23	2.15	2.15	2.26	2.02	2.10	2.00	2.11, 2.08*	—	n.a.	n.a.
July							2.16							
		(2.23*)											Mesa 33°	
1965		2.19*	—				2.16	2.01	2.10	2.00	2.11, 2.08*	—	2.33	—
Jan.	2.15			2.23	2.15	2.15								
Feb.				2.15	2.10	2.10								
1966	2.15	2.19	—	2.15	2.10	2.10	2.16	2.01	2.10	2.00	2.11, 2.08*	—	n.a.	n.a.

TABLE F-12 (cont'd)

DATE	PETROFINA		ULTRAMAR		BP	SUN	Exxon Third-Party Price Range		Third-Party Price Range	
	Lago-medio (Mar Lago) 32°	T.J. Light 31° (Lama 32°)	Lago-medio (Mar Lago)	Mesa	Trini-dad Blend 30°	Alter-nate Value 32°	Non-Integrated Buyer		Lagomedio/Lagomar 32°	Oficina 34° to 1964, 33° 1965, 1966
							Guanipa 30°	T.J. Light 31°		
1958 Jan. Nov. 15	n.a.	n.a.	—	—	n.a.	n.a.	n.a.	n.a.	2.00*	n.a.
1959 Jan. Feb. 13 Apr. 4 July	n.a.	n.a.	—	—	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1960 Jan. April July Aug. 9	2.44	(2.51)	n.a.	n.a.	n.a.	n.a.	2.23-2.53	2.52	1.41-180*	2.75
1961 March April	1.70	(1.71) 2.19* 1.59	n.a.	n.a.	n.a.	n.a.	2.23	—	n.a.	2.49
1962 Jan. April May Aug.	1.81	(1.74)	n.a.	n.a.	n.a.	1.60	2.23	—	1.60-2.34	2.49
1963 Jan. July Nov.	1.83	—	n.a.	n.a.	n.a.	1.60	—	—	1.60-2.25	—

TABLE F-12 (cont'd)

DATE	PETROFINA		ULTRAMAR		BP	SUN	Exxon Third-Party Price Range		Third-Party Price Range	
	Lagomedio (Mar Lago) 32°	T.J. Light 31° (Lama 32°)	Lagomedio (Mar Lago)	Mesa	Trinidad Blend 30°	Alternate Value 32°	Non-Integrated Buyer		Lagomedio/Lagomar 32°	Oficina 34° to 1964, 33° 1965, 1966
							Guanipa 30°	T.J. Light 31°		
1964 July	1.74 (1.79)	—	n.a.	n.a.	n.a.	1.63	— Mesa 30°	2.10	1.60-2.54	1.73* 33° API
1965 Jan. Feb.	1.75	1.75	n.a.	n.a.	n.a.	1.63	2.08	2.10	1.60-2.18	1.68*-2.31
1966	1.68	1.70	1.53	1.80	1.76	1.63	—	2.10	1.58-2.18	1.68*

TABLE F-12 (cont'd)

DATE	TEXACO			IMPERIAL OIL				SHELL				GULF	
	Mata 30°	Mesa 33°	Lago-medio 32°	Guanipa 30°	T.J. Light 31°	Ceuta 31°	Mesa 33° to 1971	Avg. Vene-zuelan 30°	Lago-treco 31°	Lagomar 32°	Ceuta 31°	Mesa 33°	East Vene-zuela 33°
1967										2.11,			1.88
Jan.	2.15	—	2.19	2.15	2.10	2.10	2.08	2.01	2.00	2.08*	2.01	—	
Apr.				2.03	2.02	1.96							
July										2.00			
Sept.													
1968	2.15	—	2.19	2.03	2.02	1.96	2.08	2.01	2.00	2.00	1.89	—	1.90
1969	2.15*	2.21	2.19	2.03	2.02	1.96	2.08	2.01	2.00	2.00		1.87	1.88
Jan.											1.78		
Aug.											1.83		
1970	n..a.*	1.94	n.a.*	2.01				2.01	2.00	2.00	1.82		—
Jan.				2.03	2.02	1.96	2.08						
March												1.93	
April				1.93	1.92	1.86							
June												1.86	
July													
Aug.													
Sept. 20				2.14	2.15	2.10							
Nov.							2.13						

TABLE F-12 (cont'd)

DATE	TEXACO			IMPERIAL OIL				SHELL			GULF		
	Mata 30°	Mesa 33°	Lago-medio 32°	Guanipa 30°	T.J. Light 31°	Ceuta 31°	Mesa 33° to 1971	Avg. Vene-zuelan 30°	Lago-treco 31°	Lagomar 32°	Ceuta 31°	Mesa 33°	East Vene-zuela 33°
1971	n.a.*	—	n.a.*	2.43				2.27				—	—
Jan.				2.14	2.15	2.10	2.13	2.01	2.00	2.00	2.00		
Feb.											2.22		
Mar.											2.22		
Mar. 16							2.53				2.54		
April				2.52	2.52	2.48					2.54		
June								2.34	2.35	2.33	2.54		
July								2.34	2.35	2.34	2.54		
Oct.								2.33	2.34	2.32	2.54		
Dec. 20											2.45		

TABLE F-12 (cont'd)

DATE	BP		ULTRAMAR		PETROFINA		SUN	EXXON THIRD-PARTY PRICE RANGE		THIRD-PARTY PRICE RANGE
	Trinidad Blend 30°	Mesa (Lagocinco) 33°	Lagomedio (Mar-Lago)	Misc.	Lagomedio (Mar-Lago) 32°	T.J. Light (Lagotreco) 31°	Alternate Value 32°	Non-Integrated Buyer		Lagomedio/Lagomar 32°
								Guanipa 30°	T.J. Light 31°	
1967 Jan. Apr. July Sept.	1.76	—	1.63 (1.55)	Mesa 1.63 Lagotreco 1.57	1.68	1.66	1.63	—	1.60-2.10	1.63-1.64
1968	1.76	—	1.70 (1.55)	—	1.71	1.73	1.80	—	—	1.70-1.80
1969 Jan. Aug.	1.76	1.75* (1.81*)	—	—	1.68	(1.69)	1.70	—	—	1.65-1.80
1970 Jan. March April June July Aug. Sept. 20 Nov.	1.76 Murphy Lagomedio 1.75 (1.63)	1.75 (1.81) (1.79)	—	Lagotreco 1.61* T.J. Light 1.64	1.65*	(1.45)	1.70	—	1.66	1.70-2.04

DATE	BP		ULTRAMAR		PETROFINA		SUN	EXXON THIRD-PARTY PRICE RANGE		THIRD-PARTY PRICE RANGE
								Non-Integrated Buyer		
	Trinidad Blend 30°	Mesa (Lagocinco) 33°	Lagomedio (Mar-Lago)	Misc.	Lagomedio (Mar-Lago) 32°	T.J. Light (Lagotreco) 31°	Alternate Value 32°	Guanipa 30°	T.J. Light 31°	Lagomedio/Lagomar 32°
1971	—	1.83	—	—	1.68*	—	2.87	2.65-	—	
Jan.		(1.87)			(1.79)			2.66		1.70-2.04
Feb.										
Mar.										
Mar. 16										2.87*
April										
June										
July										
Oct.										
Dec. 20										

DATE	TEXACO		GULF			IMPERIAL OIL			SHELL		ULTRAMAR		PETROFINA		EXXON THIRD-PARTY PRICE RANGE	
															Non-Integrated Buyer	
	Mata 30°	Lagomedio 32°	Ceuta 31°	Mesa 32°	Lagotreco 31°	Guanipa 30°	T.J. Light 31°	Ceuta 31°	Lagotreco 31°	Lagomar 32°	Lagomedio (Mercedes)	Misc. (Trinidad)	Lagomedio (Mar-Lago) 32°	Trinidad 30°	Guanipa 30°	T.J. Light 31°
1972	n.a.*	n.a.*				2.72							(1.96)	2.36	2.83-	2.58-
Jan.			2.69	2.66*	2.69*	2.74	2.75	2.71	2.58	2.56		Centro			2.86	2.83
Feb.			2.69									Lago				
Mar.			2.69	2.65	2.69											
April			2.69	2.65*	2.69	2.71	2.65	2.65	2.56	2.54		(2.46)				
May			2.69	2.61	2.69							2.65				
June			2.69	2.51	2.65							2.68				
July			2.60						2.55	2.53	(2.57)	2.37				
Aug.			2.60	2.51	2.60							go- cinco				
Sept.			2.60	2.51								2.63*				
Oct.			2.60								2.59*	(2.36)				
Nov.			2.60													
Dec.			2.60								(2.45)					

TABLE F-12 (cont'd)

DATE	SUN	TEXACO		IMPERIAL			SHELL		GULF			PETRO-FINA	EXXON THIRD-PARTY Price Range							
													Non-Integrated Buyers							
	Lagomar 32°	Mata 30°	Lagomedio 32°	Guanipa 30°	T.J. Light 31°	Ceuta 31°	Lagotreco 31°	Lagomar 32°	Ceuta 31°	Mesa 32°	Lagotreco* (Lagomedio) 32°	Mar-Lago 32°	T.J. Light 31°	Lagomedio 32°	Oficina 34°	DOE Third-Party Rep. Price	DOE Acq. Cost 32°	Tax Paid Cost Ceuta 30°	Tax Paid Cost T.J. Light 31°	Tax Paid Cost Lagomedio 32°
	Company	Company		Company			Company		Company											
1973	3.76	n.a.*	n.a.*									5.89	3.65- 5.79	—	—					
Jan.	2.95			2.84	2.77	2.77	2.64	2.64	2.62				n.a.						2.305	
Feb. 1				n.a.	2.86	n.a.														
Feb. 19					2.91		2.68	2.69	2.66	2.60										
March				"	3.08	"	2.85	2.86	2.82				"							
April				3.29	3.20	3.22	2.80	2.81	2.90				"						2.517	
May				n.a.	"	n.a.							"						2.594	
June				"	3.35*	"	2.70*	2.71*					"							
July				"	3.35*	"	2.86*	2.88*	3.04				"						2.749	
Aug.				"	3.81	"	3.12	3.13	3.31				"						3.007	
Sept.	4.80			"	n.a.	"	3.33	3.34	3.52				"						3.203	
Oct. 1				"	"	"	3.43	3.44	3.79	3.78			"						3.493	
Oct. 16				"	"	"	4.80*	4.81*												
Nov.				"	"	"	5.04*	5.06*	5.17				"						5.09	5.457
Dec.				5.91	5.80	5.82	5.16	5.17	5.52				"						5.206	5.70

TABLE F-12 (cont'd)

DATE	SUN	TEXACO		IMPERIAL			SHELL		GULF			PETRO-FINA	EXXON THIRD-PARTY Price Range							
													Non-Integrated Buyers							
	Lago-mar 32°	Mata 30°	Lago-medio 32°	Guanipa 30°	T.J. Light 31°	Ceuta 31°	Lago-treco 31°	Lago-mar 32°	Ceuta 31°	Mesa 32°	Lago-treco* (Lago-medio) 32°	Mar-Lago 32°	T.J. Light 31°	Lago-medio 32°	Oficina 34°	DOE Third-Party Rep. Price	DOE Acq. Cost 32°	Tax Paid Cost Ceuta 30°	Tax Paid Cost T.J. Light 31°	Tax Paid Cost Lagomedio 32°
	Company	Company		Company			Company		Company											
	Company* PCB													EXXON			Lago-medio			
1974	12.20*	—	PCB							10.88	10.30*	—	11.00	—	11.25					
Jan.	13.41		11.14	9.89	9.62	9.64	9.29	9.30	10.16				SUN THIRD-PARTY				9.84	9.52	9.259	9.79
Feb.	"		11.86	10.31	10.04	10.06	9.74	9.75	10.37		10.51*			Lago-	Centro-		10.46	9.93	9.672	10.41
March	"		11.43						"					cinco 32°	lago 34°		"	9.93	"	"
April	13.40		11.20		10.13*				"		(10.50)			14.10			"	n.a.	"	"
May	12.74		11.29						"								"	"	"	"
June	12.54		11.12						"		(10.49)						"	"	"	"
July	11.94		11.07	10.68	10.41*	10.43	10.10	10.11	10.89		(10.82*)						10.80	10.27	10.01	10.79
Aug.	11.50			11.08	10.81*	10.83			"	10.87*					13.47-		"	"	"	"
Sept.			11.07				10.33	10.32	"						13.48		10.75	"	"	"
Oct.	11.21		11.38	11.18	10.96*	10.98	10.48	10.47	"							10.64	11.42	"	"	"
Nov.	11.25		11.08						"							10.67	"	"	"	"
Dec.	11.14		11.05						"							10.61	"	"	"	11.72

TABLE F-12 (cont'd)

DATE	TEXACO		GULF			IMPERIAL			SHELL		BP	SUN	EXXON						
	Lago-medio 32°	Ceuta	Mesa 32°	Ofi-cina 34°	Guanipa 30°	T.J. Light 31°	Ceuta 31°	Lago-treco	Lago-mar	Lago-medio 32°	Lago-treco 32°	Lago-mar 32°	Third-Party T.J. Light 31°	DOE Third-Party Rep Price 34°	DOE Acq Cost T.J. Light 31°	DOE Acq Cost Lago-medio 32°	Tax Paid Cost Ceuta 30°	Tax Paid Cost 31°	Tax Paid Cost Lago-medio 32°
	PCB					Company													
1975		PCB	PCB	PCB				PCB	PCB	PCB	PCB	PBC	11.10-11.30						
Jan.	11.41	11.26		11.70	11.54	11.29*	11.31	10.72	10.73					11.75	10.94	11.18	10.75	10.573	11.18
Feb.	"	11.23		11.67				10.82	10.84			11.05		11.45	10.94	"	"		11.18
March	11.35	11.25		11.65				10.79	10.75			"		11.15	10.93	11.17	"		11.08
April	11.31	11.23		"	11.37	11.10	11.12	10.82	10.78			"		11.10	10.82	11.19	"		
May	"	11.25		"				10.80	10.76					11.16	10.88	11.17	n.a.		
June	11.24	11.24						10.79	10.76					11.17		11.18	10.75		
July		11.04						10.80	10.79					11.10	10.93	"	"		
Aug.	11.19	11.05						10.86	10.77					10.88		"	10.79		
Sept.	11.18	11.04						10.84	10.75					11.11		"	"		
Oct.	12.32	12.04			12.26	12.05	11.95	11.92	11.82					12.18		12.23	11.80	11.608	
Nov.	12.31	12.05	12.25*					11.89	11.83		11.94			11.82		"	"		
Dec.	12.31	12.05						11.86	11.80					11.92		"	"		
										(Ceuta) 31°		Lago-medio 32°			T.J. Light Min.S Prices 31°		Ceuta Min Sales Price 30°		Lagomedio Min Sales Price 32°
1976	PCB		—	—							—		n.a.						
Jan.		12.17			12.40	12.30	12.26	12.30	12.32					12.13	12.30	12.26	12.20	11.608	12.40
Feb.	12.41	12.20						12.28	12.24					12.21	"	"	"		"
March	12.49	12.25						12.32	12.27	12.20*				12.11	"	"	"		"
April	12.45	12.24					—	12.28	12.34					12.11	"	12.49	"		"
May	12.44	12.25					"	12.30	12.34					12.23	"	"	"		"
June	12.42	12.29					"	12.33	12.29	(12.31*)				12.17	"	"	"		"
July	12.46	12.24					"	12.29	12.27					12.13	"	12.46	"		"
Aug.	12.44	12.23					"	12.32	12.26					12.12	"	"	"		"
Sept.	12.49	12.20					"	12.23	12.24					12.12	"	"	"		"
O.	12.50	12.18				12.35	"	12.27	12.26			12.65		12.31	12.35	12.53	"		12.45
Nov.	12.46	"					"	12.23	12.33					12.26		"	"		"
Dec.	12.50	"					"	12.30	12.27	(12.76*)		12.81		12.31		"	"		"

TABLE F-12 (cont'd)

DATE	SUN	TEXACO		IMPERIAL		SHELL		GULF				
	Lago-medio 32°	Lagomedio 32°		Guanipa 30°	T.J. Light 31°	Lago-treco	Lago-mar	Ceuta	DOE Acq. Cost Lago-medio 32°	Minimum Sales Prices		
		Company	PCB	Company						Ceuta 30°	T.J. Light 31°	Lago-medio 32°
1977	—					PCB	PCB	PCB				
Jan.		13.64	13.67	13.59	13.54	13.55	13.58	13.38	13.70	13.39	13.54	13.64
Feb.			13.68			13.55	13.58	13.37	"	"	"	"
March			13.48			13.56	13.57	"	"	"	"	"
April			13.70			13.60	13.58	13.38	"	"	"	"
May			13.70			13.55	13.57	13.37	"	"	"	"
June			13.64			13.60	"	"	13.72	"	"	"
July			13.71			13.52	"	13.38	"	"	"	"
Aug.			13.71			13.62	13.56	13.48	"	"	"	"
Sept.			13.72			13.57	13.58	13.42	13.73	"	"	"
Oct.			13.71			13.59	13.58	13.38	"	"	"	"
Nov.			13.71			13.59	13.57		"	"	"	"
Dec.			13.69			13.55	13.57	13.42	"	"	"	"
1978	PCB											
Jan.		13.64	13.69	13.59	13.54	13.58	13.56	13.43	13.75	13.39	13.54	13.64
Feb.			13.69			13.57	13.57	13.44	"	"	"	"
March			13.68			13.56	13.58		"	"	"	"
April			13.68			13.57	13.57	13.05	13.72	"	"	"
May			13.65			13.55	"	13.39	"	"	"	"
June			13.66			13.54	13.56	13.32	"	"	"	"
July			13.66		13.39		"		13.71	"	"	"
Aug.			13.69				"	13.06	"	"	"	"
Sept.			13.65				13.57	"	"	"	"	"
Oct.			13.65				13.56	13.10	"	"	"	"
Nov.	14.26		13.65				"	13.04	"	"	"	"
Dec.			13.66			13.54	13.57	13.05	"	"	"	"

TABLE F-12 (cont'd)

DATE	TEXACO		IMPERIAL		SHELL		GULF					
	Lagomedio 32°		Guanipa 30°	T.J. Light 31°	Lago-treco	Lago-mar	Ceuta	DOE Third-Party Rep. Price Ceuta 31°	DOE Acq. Cost Lago-medio 32°	Minimum Sales Prices		
	Company	PCB	Company							Ceuta 30°	T.J. Light 31°	Lago-medio 32°
1979					PCB	PCB	PCB					
Jan.	14.32	14.34	14.27	14.22	14.22	14.24	13.82	13.98	14.40	14.06	14.22	14.32
Feb.	"	14.36				"		14.12	14.38			
March	"	14.33				"	14.07	13.97	14.44			
April	16.81	16.81		16.70		16.73	16.53	16.51	16.86	16.53	16.70	16.81
May	17.41	17.20		17.30	17.31	17.14		16.93	17.29	17.13	17.30	17.41
June	"	17.44			17.28	17.34	17.11	17.00	17.48			
July	21.32	21.34		20.90	21.24	21.00	20.60	20.47	21.28	20.58	20.90	21.32
Aug.	"	21.35			21.30	21.13	20.59	20.42	21.40			
Sept.	"	"			21.24	21.00	20.62	20.37	21.49			
Oct.	"	21.34			20.93	21.06	20.57	20.46	21.30			
Nov.	"	21.35			20.93	21.08	20.57	n.a.	21.26			
Dec.	25.22	25.23	25.52	24.90	21.83	22.68	20.58	24.37	22.72	24.58	24.90	25.22
1980	Company	PCB	PCB	PCB			—	n.a.	n.a.			
Jan.	n.a.	27.23	27.52*	26.90*	27.01	27.19				26.58	26.90	27.22
Feb.		29.34	29.46	28.78	28.47	29.15				28.48	28.90	29.22
March		"	29.46	29.36	29.21	29.24						
April		"	29.59	29.27	29.43	"						
May		31.07	29.46	29.30	29.13	29.59				31.98	32.40	32.72
June		33.23		32.82	32.27	32.53						
July		33.80	33.52*	33.00*		33.12				32.58	33.00	33.32
Aug.		33.71	33.56	33.53		33.18						
Sept.		33.74		33.56		33.17						
Oct.		33.77	33.59	33.53		33.19						
Nov.		33.53	33.56	33.52		33.21						
Dec.		33.59	33.56	33.65		33.16						

TABLE F-12 (cont'd)

DATE	TEXACO	IMPERIAL		SHELL	PETROFINA	GULF			
							Minimum Sales Prices		
	Lago-medio 32°	Guanipa 30°	T.J. Light 31°	Lago-mar	Lago-treco 32°	Ceuta	Ceuta 30°	T.J. Light 31°	Lago-medio 32°
1981	PCB	PCB	PCB	PCB	PCB	—			
Jan.	36.70		36.60	36.74			35.58	36.00	36.32
Feb.	36.63		36.70	36.67					
March	36.85	36.56	36.48	36.68					
April	36.44		36.64	36.70					
May	36.74		36.73	36.74					
June			36.54	36.63					
July	36.81		36.39	36.69					
Aug.	36.77		36.45	36.64					
Sept.	36.81		36.42	36.67					
Oct.	36.85		36.60	36.58	36.49		34.58	35.00	35.32
Nov.	35.81		35.52	35.30	35.26				
Dec.	35.81		35.60	35.32	35.64				
1982						PCB			
Jan.	35.83		35.59	35.28	34.99	34.63	34.58	35.00	35.52
Feb.	35.88		35.72	35.30	35.93	34.91	"	"	"
March			35.62	35.23	35.06	34.87	"	"	"
April	35.85		35.79			34.87	"	"	"
May		35.90	35.43	35.20	35.06	34.72	"	"	"
June	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	"	"	"
July	"	"	"	"	"	"	"	"	"
Aug.	"	"	"	"	"	"	"	"	"
Sept.	"	"	"	"	"	"	"	"	"
Oct.	"	"	"	"	"	"	"	"	"
Nov.	"	"	"	"	"	"	"	"	"
Dec.	"	"	"	"	"	"	"	"	"

TABLE F-12 (cont'd)

Notes to Table F-12 on Comparative FOB Costs of Imported Venezuelan Light and Trinidadian (30.0 — 34.0° API) Crude Oils, 1958 to 1982

General Notes

1. The FOB price data shown on this table mainly concern Venezuelan light crude oils with API levels ranging from 30 to 34°. In certain cases, it was necessary to convert price data reported for API levels outside this range. To make comparisons across companies, the prices of certain crude oils were standardized to the same API level. The adjustment formula used was 2¢ per degree until 1973, 6¢ for 1974 to 1976, 10¢ for 1977 to 1978 and 6¢ thereafter.

   Lagomar/Lagomedio (31.0 to 32.9° API) crude oils were examined in detail in Tables 5 and 6. The data for such crude oils were also used in this table whenever a company's other Venezuelan light crude price data were insufficient to allow meaningful comparisons. This was the case with Texaco, Shell, Petrofina and Ultramar.

   For 1958 to 1975 inclusive, the API levels are shown in the column headings. For 1976 to 1982 the API levels reported in the monthly PCB data are not shown because of their variation per month.

2. The FOB prices shown are ex La Salina or equivalent loading ports. Company FOB prices reported ex Amuay or equivalent ports (i.e., Puerto La Cruz, Cardon) were converted to La Salina equivalent prices by subtracting 3¢ per barrel.

Column Notes:

1. *Texaco*: The Mata, Guanipa, Oficina/Mesa and Mesa prices to 1969 were converted to equivalent FOB ex La Salina prices by subtracting 3¢ per barrel from the original Puerto La Cruz prices reported. (a) *Mata*: The January 1958 price is based on a 32° price of $2.89. For 1964, the figure shown is a weighted (by volume) average of the FOB prices (at $2.25 and $2.19) for imports to Halifax and Portland. The 1969 figure is based on a 32° API price of $2.19. For 1970 to 1973, Texaco provided ocean loss and AFRA freight rate data to enable FOB prices to be derived from the CIF contract prices in I-158. These are not shown because the use of AFRA freight rates produces FOB prices that are biased low. (b) *Guanipa*: The 1958 price is based on a 31° API price of $2.77. The March 1961 and August 1962 figures were purchases from Imperial Oil (see International Sector Documents, Book 2, Tab 10, pp. 57572 and 74. (c) *Lagomedio/Lama*: The 1960 to 1968 figures are based on 31° prices. The 1964 price is for January. No imports were reported for the 1965 contract price shown. For 1970 to 1976 FOB prices derived from CIF prices using ocean loss and AFRA freight rate data provided by Texaco were not shown because the prices which resulted were biased low. See notes to Tables 5 and 6 for more details. The Lagomedio and Lama prices shown in 1964 reflect a 6¢ per barrel reduction that was given on imports to the Montreal refinery. The imports to Halifax were at the contract price of $2.29 (see Table 5 for Lagomedio). (d) *Mesa*: The 33° API figure shown for 1969 is based on a 28° API price of $2.14. The 1970 price is for Oficina 33° API crude; it was derived from CIF price data in I-16G, using the pipeline fee (10.4¢) and the freight rate (24.9¢) from I-161 and I-16G, respectively.

2. *Gulf*: The prices shown for 1958 to 1973 for Mesa, Oficina and East Venezuelan crude oils were converted from FOB Ex Puerto La Cruz to FOB prices La Salina by subtracting 3¢. (a) *Ceuta*: The 1961 figure is based on a 29° contract price of $2.26; there were no imports made at this price (see I-360, tab 1). The 1967 to 1974 prices were standardized to 31° from average annual and monthly prices reported in I-16E and monthly contract prices found in I-380, tabs 20, 22, 25, 31, 33, 39, 40 and 46. According to I-361, tab 8, p. 62992, Gulf Canada was to receive lower prices than its January 1972 contract price of $2.69 for volumes of Ceuta 31° used to replace its supplies of Kuwait 31° and Iranian Heavy 31°; these two crude oils were less costly due to lower transportation costs and lower middle east FOB prices. Gulf Canada estimated that equivalent Ceuta 31° prices to replace Kuwait 31° and Iranian Heavy 31° were $2.37 and $2.67 in April/May 1972. In December 1972 a reduction of 10¢ was accorded Gulf Canada to give recognition to the cost savings available because of the transshipping made possible using Very Large Crude Oil Carriers (VLCC's) to Pt. Tupper and smaller tankers to Portland; the price went from $2.69 to $2.59. The monthly PCB prices for 1974 converted to 31° were: $10.02, $10.46, $10.46, $10.49, $10.47, $10.47, $10.83, $10.84, $10.82, $10.79, $10.82 and $10.79. The PCB prices shown for 1975 to 1982 were not standardized to 31°. (b) *Mesa*: The prices shown have been standardized to 30° for 1961, 33° for 1965 to 1970 and 32° for 1972 to 1975. The *asterisked* PCB prices for October 1974 and November 1975 were also converted to 32° from prices of $10.78 (30.5°) and $12.28 (32.4°). The *asterisked* 1972 prices are from the International Sector Documents, Book 8, Tab 240, p. 78774. (c) *East Venezuelan/Oficina*: For 1958 to 1961 the prices are for Oficina standardized to 34° (see I-16E contract #3 and I-353). The 1962/1963 prices are for East Venezuelan blend converted from 33° to 34° (see I-353). For 1967 to 1969 the prices of East Venezuelan blend were standardized at 33°. The April 1974 PCB price was converted to 31° from a price of $10.44 (31.4°). The Oficina prices for 1975 have been standardized to 34° API to allow comparisons with the DOE third-party representative prices for 34° API Venezuelan crude oil. (d) *Lagotreco*: The prices shown have been standardized to 31° API. The *asterisked* January 1972 price is from the International Sector documents, Book 8, Tab 240, p. 78774. (e) *Lagomedio*: The monthly PCB prices shown in parentheses were standardized at 32° from prices of $10.57 (33°), $10.57 (33.4°) and $10.90 (33.3°).

Notes to Table F-12 on Comparative FOB Costs of Imported Venezuelan Light and Trinidadian (30.0 — 34.0° API) Crude Oils, 1958 to 1982

Column Notes:

3. ***Imperial Oil***: (a) *Guanipa*: The original 1958 to 1973 FOB prices ex Puerto La Cruz were converted to FOB La Salina prices by deducting 3¢. The annual figures for 1970 to 1973 are time weighted averages using the number of months per price as the weights. For 1980, the ***asterisked*** figures represent the prices as reported by Imperial in Exhibit I-49, p. IX-6; the PCB price for January 1980 was $26.55; (b) *T.J. Light*: For 1958 to January 1962, the price figures shown have been adjusted from the original ex Amuay FOB prices reported by Imperial, to ex La Salina FOB prices by reducing the price by 3¢ per barrel. The May 1962 to 1982 prices are all original ex La Salina prices. From July 1974 to January 1975 inclusive, the prices are converted from the 34° prices that were available. The 34° prices for the corresponding months shown on the table were $10.31, $10.68, $11.08, $11.23 and $11.50, respectively. For 1980, the ***asterisked*** figures represent the prices as reported by Imperial in Exhibit I-49, p. IX-6; the PCB prices for January and July were $27.17 and $33.24; (c) *Ceuta*: The 31° prices shown are based on a 35° price in 1963 (I-51C, tab VI-32) and 31° prices in I-49 for 1968 to 1976. I-51C, Tab VI-40 has price data for 1968 to 1970 that indicates that the I-49 prices listed at 32° for those years are actually 31° prices; the 1971 to January 1972 prices were also assumed to be erroneously listed as 32°; (d) *Oficina*: The original FOB prices ex Puerto La Cruz were converted to FOB La Salina by deducting 3¢. The 1958 and 1959 price figures were obtained from contracts at C-16 to C-14 of the C Documents and by deducting from the posted prices in effect in that year, those price allowances or discounts which were available to Imperial Oil from Esso Export (see Exhibit I-51C, Tab VI-29); (e) ***Mesa***: The original FOB prices ex Puerto La Cruz were converted to FOB La Salina by deducting 3¢. The 1967 price for 33° is based on the reported 30° price of $2.05 ex Puerto La Cruz in I-49; (f) ***Albury Offshore Subsidiary Prices***: For 1968 to 1972, the prices shown are net of the offshore subsidiary's markup.

4. ***Shell***: For Oficina 33° prices reported under the average Venezuelan 33° column from 1958 to 1961, Mesa 30° prices from 1960 to 1966 and Lagomar 30° prices from 1962 to 1971 and 32° in 1972, the figures shown reflect a reduction of 3¢ per barrel to convert the Puerto La Cruz or Cardon prices found in the Shell exhibits to FOB prices ex La Salina or equivalent ports. (a) ***Average Venezuelan***: According to Exhibit I-16F, Shell imported Oficina 33° API crude exclusively from 1958 to March 1960. From April 1960 to March 1961 inclusive, other unidentified Venezuelan crude oils were also increasingly imported. From April 1961 to March 1962, these substitute crude oils were Mesa 30° API and Lagotreco 28° API. By April 30, 1962, no Oficina 33° crude oil was imported, but a new substitute, Lagomar/Bachaquero 30° API blend was available. On May 28, 1963 another substitute crude blend, Lagotreco/Lagomar 30° was added. The average Venezuelan prices shown from 1958 to 1961 are for 33° API while the prices for 1962 and thereafter are for 30° API crude oil blends. (b) ***Mesa***: The prices for 1958 to March 1961 and for April 1, 1962 to October 1963 reported in I-234, Appendices A and B, relate to 30° API crude oil ex Puerto La Cruz. The same gravity level is assumed to prevail for the prices noted for November 1963 to 1966 (see I-234, p. 15). (c) *Lagotreco*: The 31° prices shown for 1960 to March, 1971 are based on 28° prices reported by Shell ex Puerto Miranda. For April to December 1971, the prices found in I-16F at exhibit C were determined (by comparison to the 31° prices for Lagomar) to be 29° prices and converted to 31° prices. The notes to exhibit C identified the 1972 and 1973/1974 prices from that source as 31° and 32°, respectively; the 1973/1974 prices were converted to 31°. The ***asterisked*** figures in 1973 are actually for July 1, July 15, November 1 and November 15, respectively. The PCB prices for 1975 to 1980 have not been standardized to 31°. (d) ***Lagomar***: See Table 5 note. The 32° API prices for 1962 are based on prices reported for a spot sale of 30° API Lagomar/Bachaquero blend at $2.10 on April 24th and the April 30th contract price of $2.05 for the same blend. The ***asterisked*** figures shown from 1963 to January 1967 represent the lower price available to Shell when liftings of Lagomar crude oil exceeded 50,000 barrels per day. The ***asterisked*** figures in 1973 are for July 1, July 15, November 1 and November 15, respectively. Higher prices for shipments in tankers of less than 80,000 tons are shown in Table 5. (e) ***Lagomedio***: See Table 5 note. The 32° API prices shown for 1976 are based on 32.9° API prices of $12.36 and $12.81, respectively. (f) *Ceuta*: The 31° API price shown for 1976 is based on a 30.5° API price of $12.17. (g) ***Sulphur Premiums and Bar Tolls***: The prices shown in 1974 for Lagotreco and Lagomar include sulphur premiums of 15 and 10¢, respectively, as suggested by Exhibit I-16F at note 14 plus Bar Tolls of 3.8¢ effective June 12 for crude oil loading at Puerto Miranda (see note 15 of Exhibit I-16F). The monthly 1974 PCB prices for Lagotreco converted to 32° are $9.37, $9.82, $9.84, $9.62, $9.81, $9.81, $10.14, $10.11, $10.23, $10.52, $10.51, $10.50. The unconverted PCB prices for Lagomar are shown on Table 5.

5. ***Petrofina***: The figures represent Canadian purchase or import prices net of the Pannac (i.e., offshore subsidiary) dividend per barrel. (a) ***Lagomedio (MarLago)*** 32°: See note on Table 5. (b) ***T.J. Light 31°***: The T.J. Light prices shown for 1961 were converted from 32° prices. The ***asterisked*** price represents a purchase from Imperial Oil in March 1961 (see International Sector Documents, Book 2, tab 10, p. 57573). Both 1961 and 1962 prices were based on prices ex Amuay which were reduced by 3¢ per barrel to make them equivalent to FOB ex La Salina. The 1965 to 1968 T.J. Light prices were assumed to be FOB La Salina. (c) *Lagotreco 31°*: The prices for 1969 and 1970 were converted from 30° prices; the 1981 and 1982 prices shown for Lagotreco have been standardized to 32° API using price data found in the Petroleum Compensation Board records. (d) ***Trinidad 30°***: The price shown is based on a 29° price. The 1981 and 1982 prices shown for Lagotreco have been standardized to 32° API using price data found in the Petroleum Compensation Board records.

6. ***Ultramar***: The prices shown are net of the crude oil purchasing offshore subsidiary (Ultramar Liberia Ltd.) price markup but not of any markup that may have been added by the offshore subsidiary (Golden Eagle Liberia Ltd.) handling freight. There was no information available on the API levels of the Venezuelan and Trinidadian crude oils imported by Ultramar.

Notes to Table F-12 on Comparative FOB Costs of Imported Venezuelan Light and Trinidadian (30.0 — 34.0° API) Crude Oils, 1958 to 1982

Column Notes:

7. ***BP***: (a) ***Trinidad Blend 30°***: Prices are shown for Trinidad 30° crude oil because of its reported similarity to Guanipa 30° and Mata 30° imported by Imperial and Texaco. The prices are based on contract CIF prices of $1.91 for 1966 to 1968 from which an estimated FOB price of $1.76 was taken from suggestions found in I-296. With the CIF price of $1.91 only increasing to $1.92 in the 1969 contract it was reasonable to assume that FOB prices were constant over that period. The 1969 FOB contract price was $1.70 for 27° or $1.76 for 30° as shown. According to the 1960 contract, the CIF Portland prices for 30° Trinidad Blend would have been $2.50 in February and $2.40 in August 1960. In 1960, Texaco reported CIF prices for Mata 30° of $2.78. Imperial Oil reported FOB prices for Guanipa 30° of $2.42 (January), $2.35 (April) and $2.25 (August) which when added to the average freight rate (21¢) in effect in the early 1960s for Guanipa (see I-49, p. IX-2) results in CIF prices of $2.63, $2.56 and $2.46, respectively. In 1961 Texaco imported Trinidad 30° at $2.43 FOB and $2.69 CIF. These figures were based on FOB prices of $2.476 for 32.3° (see International Sector Documents Book 2, tab 10, p. 57513). (b) *Mesa 33°*: The prices shown were based on Puerto La Cruz prices which were reduced by 3¢ per barrel to convert them to FOB La Salina equivalent prices. No imports were reported to Montreal via the Portland Pipeline in 1969. The Mesa 33° API prices for 1969 to 1971 are based on 28°, 32° and 32° prices of $1.68, $1.76 and $1.84 found in I-289, tab 4. (c) *Lagocinco 33°*: The 33° API prices for 1969 to 1971 are based on 34°, 35° and 35° prices of $1.83, $1.83 and $1.91. No imports were reported in 1969. (d) *Lagotreco 32°*: The 1975 Lagotreco price was standardized to 32° API from a PCB 31.5° price of $11.91.

8. ***Sun Alternate Value***: See Table 5 note. The alternate value figures are the arm's length or market value estimates for Lagomedio/Lagomar 32° found in I-188. The 1974 *asterisked* Lagomar price is from I-161 while the monthly prices are from the Petroleum Compensation Board records. The February, June and July prices are for Lagomedio crude oil.

9. ***Exxon Third-Party Price Range***: These figures represent the prices realized (ex La Salina) on third-party sales to Non-Integrated Buyers. The *asterisked* price for 1970 is for Ceuta 31°.

10. ***Third-Party Price Range for Lagomedio/Lagomar 32°***: These represent sales to non-integrated buyers. See note to Table 5.

11. ***Third-Party Price Range for Oficina 34°/33°***: These represent sales to non-integrated buyers by Esso International (I-50 Appendix 3, I-50A and I-78A) and 1964 to 1966 sales to Petrobras by the Sun Oil and Shell Groups and Atlantic Richfield Co. (see I-51A, tab II-5, p. 76). The Petrobras purchase prices, which are *asterisked*, were derived from 35° prices which were assumed to be Oficina, ex Puerto La Cruz. Therefore, they were reduced by 3¢ per barrel to make them equivalent to La Salina FOB prices.

12. ***Murphy***: The 1970 prices for Lagomedio 32° are shown under the BP Trinidad Blend 30° column. For an explanation of the 1970 prices see note to Table 5.

13. ***Sun Third-Party***: These figures represent the Sun Oil Group's third-party transaction prices with non-integrated petroleum companies as reported in I-347, tab 6.

14. ***Tax Paid Cost*** refers to the cost of equity crude oil. It is the sum of taxes and royalties imposed by the host country government plus production costs. The data for 1970 onwards include freight premiums, but exclude any applicable sulphur premiums (see Exhibit I-107).

15. ***DOE Acquisition Cost***: These figures are from the Brant/Davidson Exhibit I-80. The data are term third-party acquisition cost figures reported to the United States Department of Energy (DOE). Where more than one figure was reported per month, Brant testified that the highest figure was chosen. However, if several figures were reported from the same company in any month, then only the latest or revised figure reported by that company was considered (TS Vol. 71, p. 13348).

15. ***Minimum Sales Prices***: These figures are equivalent to official government selling prices.

16. ***DOE Third-Party Representative Price***: Representative price was defined by the United States Department of Energy (DOE) as being the the lowest price, at which 50 per cent or more (by volume) of arm's length transactions took place per month. That is, the weighted median price. The DOE only published data on Light Venezuelan crude oil of 34° API from October 1974 to 1976. No information is available on the exact API level of the 1979 Ceuta representative price data. It is assumed to be 31° because of the information in I-87, p. 18279.

G

Statistics and Other Material Related to Petroleum Refining

TABLE G-1

Refinery Yields of Petroleum Products in Canada, 1952-1984
(Per Cent)

Year	Motor Gaso-line	Heavy Fuel Oil (Nos.4-6)	Light Fuel Oil (Nos.2-3)	Diesel Fuel Oil	Petro-Chem Feed-stock	Avia-tion Fuel*	Others
1952	42.0	19.9	11.1	7.1	0.6	1.1	18.2
1955	39.6	20.1	16.6	6.8	1.0	1.7	14.2
1960	36.2	16.5	19.9	8.4	2.2	2.1	14.7
1965	36.1	17.1	19.9	8.6	2.8	2.3	13.2
1967	36.0	17.3	15.8	11.4	1.9	2.7	14.9
1968	35.6	17.8	15.9	11.6	1.7	2.7	14.7
1969	35.8	17.9	15.8	11.5	1.9	2.9	14.2
1970	35.1	18.2	15.6	11.8	2.1	3.3	13.9
1971	32.8	20.5	15.5	11.9	2.1	3.4	13.8
1972	33.0	22.0	14.9	11.5	2.4	3.4	12.8
1973	32.9	21.4	15.0	11.4	2.0	3.7	13.6
1974	32.9	21.5	14.4	11.2	1.6	3.9	14.5
1975	35.4	20.2	13.4	11.6	1.4	4.2	13.8
1976	35.7	18.6	13.5	12.2	2.1	4.3	13.6
1977	34.3	19.1	13.3	12.6	3.6	4.1	13.0
1978	34.8	18.2	12.4	12.9	4.7	4.5	12.5
1979	35.0	17.6	14.6	13.2	4.7	4.5	10.4
1980	36.1	16.4	14.5	13.6	4.6	4.6	10.2
1981	37.4	15.7	12.6	14.1	5.0	4.7	10.5
1982	39.5	13.6	12.1	14.6	5.3	4.8	10.1
1983	39.3	11.1	10.5	16.1	5.1	4.8	13.1
1984	40.9	10.7	10.3	18.8	4.9	4.9	9.5

Note: * Includes aviation gasoline and turbo fuel — kerosene and naphtha type.

Source: Canadian Petroleum Association, *Statistical Handbook*, Section VIII, Table 7.

TABLE G-2

Distribution of Petroleum Refinery Capacity by Refinery Size — Canada, U.S., Japan, Western Europe, 1970 and 1984

	% of Total Refinery Capacity							
Size Class	Canada		U.S.		Japan		W. Europe	
Barrels/Day	1970	1984	1970	1984	1970	1984	1970	1984
0 – 24,999	17.4	3.7	8.7	5.5	1.7	1.2	2.1	1.4
25,000 – 49,999	26.4	12.1	13.5	11.8	10.1	3.7	4.6	2.0
50,000 – 74,999	26.8	13.5	11.6	9.0	19.6	7.9	10.5	5.3
75,000 – 99,999	12.6	23.1	12.0	7.5	—	8.1	20.4	11.9
100,000 – 149,000	16.8	24.9	13.2	17.1	37.1	39.4	21.6	19.0
150,000 +	—	22.7	41.1	49.1	31.5	39.7	40.6	60.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Energy, Mines and Resources Canada files and *Petroleum Processing in Canada. Petroleum Times: World Refineries Survey 1984*, (March 1984.)

TABLE G-3

Canada — Per Cent of Petroleum Refinery Capacity by Size Class, Selected Years, 1960 — 1984

Size Class	Nos. of Refineries				Per Cent of Capacity			
Barrels/Day	1960	1970	1980	1984	1960	1970	1980	1984
0 – 24,999	30	20	12	8	29.0	17.4	7.8	3.7
25,000 – 49,999	9	10	6	6	34.4	26.4	10.8	12.1
50,000 – 74,999	3	6	5	3	18.6	26.8	12.9	13.5
75,000 – 99,999	2	2	7	5	18.0	12.6	37.4	23.1
100,000 – 149,000	—	2	3	4	—	16.8	11.8	24.9
150,000 +	—	—	2	2	—	—	19.3	22.7
Total	44	40	35	28	100.0	100.0	100.0	100.0

Sources: For 1960, 1970, 1980, Energy, Mines and Resources Canada, *Petroleum Processing in Canada*, Issues for Jan. 1961, Jan. 1971, Dec. 1979. For 1984, Energy, Mines & Resources files.

TABLE G-4

Canadian Petroleum Refineries — Selected Data, 1947-1984

Year	Capacity Utilization (%)	Canadian as % Total Crude Oil
1947	80.2	8.8
1948	77.4	13.4
1949	78.7	21.4
1950	84.2	24.4
1951	85.5	36.2
1952	84.5	41.7
1953	84.6	46.0
1954	84.8	54.7
1955	86.3	55.7
1956	87.5	53.9
1957	85.5	53.2
1958	77.8	55.6
1959	83.8	56.6
1960	81.0	54.1
1961	84.7	54.1
1962	82.3	56.2
1963	89.3	56.0
1964	88.4	58.1
1965	89.2	59.2
1966	91.2	58.1
1967	86.2	57.9
1968	88.6	57.2
1969	88.3	56.0
1970	91.4	55.4
1971	84.4	51.9
1972	90.9	48.6
1973	90.6	48.9
1974	86.9	54.1
1975	81.5	51.6
1976	79.3	57.4
1977	83.8	62.8
1978	81.0	65.6
1979	87.3	68.6
1980	87.8	70.7
1981	81.4	70.7
1982	72.0	77.2
1983	76.7	82.4
1984	76.3	82.8

Source: For Capacity Utilization, Canadian Petroleum Association, *Statistical Handbook*, Section VIII, Table 6, June 1985. For Canadian as % Total Crude Oil, Energy, Mines and Resources Canada, *Petroleum Processing in Canada*, various issues.

TABLE G-5

Canadian Petroleum Refineries — Number of Operating Refineries and Capacities by Province in (A) Barrels and (B) Cubic Meters Per Calendar Day, 1940 — 1984

YEAR	NEWFOUND-LAND		NOVA SCOTIA		NEW BRUNS-WICK		QUEBEC		ONTARIO		MANITOBA		SASKATCHE-WAN		ALBERTA		B.C./NWT		CANADA	
	Nos.	Cap.	Nos.	Cap.	Nos.	Cap.	Nos.	Cap.	Nos.	Cap.	Nos.	Cap.	Nos.	Cap.	Nos.	Cap.	Nos.	Cap.	Nos.	Cap.
1940			1	A) 32,500 B) 5165.3	1	A) 250 B) 39.7	4	A) 64,500 B) 10251.1	5	A) 57,500 B) 9138.6	4	A) 4,150 B) 659.6	10	A) 16,220 B) 2577.9	9	A) 16,850 B) 2678.0	4	A) 25,300 B) 4021.0	38	A) 217,270 B) 34531.1
1941			1	A) 34.500 B) 5403.7	1	A) 250 B) 39.7	4	A) 67,000 B) 10648.4	5	A) 68,000 B) 10807.4	4	A) 4,150 B) 659.4	9	A) 17,300 B) 2749.5	7	A) 16,250 B) 2582.6	4	A) 25,340 B) 4027.3	35	A) 232,290 B) 36918.3
1942			1	A) 34,000 B) 5403.7	1	A) 250 B) 39.7	4	A) 67,000 B) 10648.4	5	A) 68,000 B) 10807.4	4	A) 4,150 B) 659.4	8	A) 16,775 B) 2666.1	8	A) 18,100 B) 2876.7	4	A) 25,340 B) 4027.3	35	A) 233,615 B) 37128.9
1943			1	A) 34,000 B) 5403.7	1	A) 250 B) 39.7	4	A) 67,000 B) 10648.4	6	A) 76,250 B) 12118.6	4	A) 4,150 B) 659.4	8	A) 17,025 B) 2705.8	7	A) 18,400 B) 2924.3	4	A) 25,340 B) 4027.3	35	A) 242,415 B) 38527.5
1944			1	A) 34,000 B) 5403.7	1	A) 250 B) 39.7	4	A) 63,000 B) 10012.7	6	A) 76,250 B) 12118.6	3	A) 3,900 B) 619.8	7	A) 17,075 B) 2713.8	6	A) 19,300 B) 3067.4	4	A) 25,340 B) 4027.3	32	A) 238,865 B) 37963.3
1945			1	A) 34,000 B) 5403.7	1	A) 250 B) 39.7	4	A) 59,000 B) 9377.0	6	A) 75,450 B) 11991.4	3	A) 4,500 B) 715.2	7	A) 18,075 B) 2872.7	4	A) 18,100 B) 2876.7	4	A) 21,840 B) 3471.1	30	A) 231,215 B) 36747.5
1946			1	A) 34,000 B) 5403.7	1	A) 300 B) 47.7	4	A) 71,000 B) 11284.2	6	A) 77,950 B) 12388.7	3	A) 4,500 B) 715.2	7	A) 18,175 B) 2888.6	4	A) 17,300 B) 2749.5	4	A) 22,640 B) 3598.2	30	A) 245,865 B) 39075.8
1947			1	A) 34,000 B) 5403.7	1	A) 300 B) 47.7	4	A) 73,000 B) 11602.0	6	A) 87,950 B) 13978.1	3	A) 4,500 B) 715.2	7	A) 17,475 B) 2777.3	6	A) 21,300 B) 3385.2	4	A) 23,400 B) 3719.0	32	A) 261,925 B) 41628.2
1948			1	A) 25,000 B) 3973.3	1	A) 300 B) 47.7	4	A) 107,000 B) 17005.7	6	A) 88,700 B) 14097.3	3	A) 4,500 B) 715.2	7	A) 26,475 B) 4207.7	7	A) 35,750 B) 5681.8	4	A) 27,750 B) 4410.4	33	A) 315,475 B) 50139.1
1949			1	A) 22,000 B) 3496.5	1	A) 300 B) 47.7	4	A) 124,000 B) 19707.6	5	A) 83,700 B) 13302.6	3	A) 7,300 B) 1160.2	7	A) 26,475 B) 4207.7	7	A) 43,200 B) 6865.9	4	A) 26,650 B) 4235.5	32	A) 333,625 B) 53023.7
1950			1	A) 22,000 B) 3496.5	1	A) 300 B) 47.7	4	A) 143,000 B) 22727.3	4	A) 75,200 B) 11951.7	3	A) 7,800 B) 1239.7	8	A) 33,575 B) 5336.1	7	A) 46,900 B) 7453.9	4	A) 30,100 B) 4783.8	32	A) 358,875 B) 57036.7
1951			1	A) 22,000 B) 3496.5	1	A) 300 B) 47.7	4	A) 160,000 B) 25429.1	4	A) 79,400 B) 12619.2	4	A) 20,500 B) 3258.1	10	A) 47,500 B) 7549.3	11	A) 61,750 B) 9814.0	4	A) 30,100 B) 4783.8	39	A) 421,550 B) 66997.8
1952			1	A) 22,000 B) 3496.5	1	A) 300 B) 47.7	4	A) 164,000 B) 26064.8	5	A) 104,500 B) 16608.4	4	A) 19,700 B) 3131.0	10	A) 50,300 B) 7994.3	9	A) 68,000 B) 10807.4	4	A) 29,600 B) 4704.4	38	A) 458,400 B) 72854.4
1953			1	A) 18,000 B) 2860.8	1	A) 300 B) 47.7	4	A) 176,000 B) 27972.0	6	A) 135,000 B) 21455.8	4	A) 20,000 B) 3178.6	10	A) 58,100 B) 9233.9	10	A) 69,150 B) 10990.1	4	A) 47,100 B) 7485.7	40	A) 523,650 B) 83224.7

TABLE G-5 (cont'd)

YEAR	NEWFOUNDLAND		NOVA SCOTIA		NEW BRUNSWICK		QUEBEC		ONTARIO		MANITOBA		SASKATCHEWAN		ALBERTA		B.C./NWT		CANADA	
	Nos.	Cap.	Nos.	Cap.	Nos.	Cap.	Nos.	Cap.	Nos.	Cap.	Nos.	Cap.	Nos.	Cap.	Nos.	Cap.	Nos.	Cap.	Nos.	Cap.
1954			1	A) 18,000 B) 2860.8	1	A) 300 B) 47.7	4	A) 171,500 B) 27256.8	6	A) 142,300 B) 22616.0	4	A) 20,000 B) 3178.6	10	A) 67,300 B) 10696.1	10	A) 68,600 B) 10902.7	5	A) 56,750 B) 9019.4	41	A) 544,750 B) 86578.2
1955			1	A) 18,000 B) 2860.8	1	A) 300 B) 47.7	5	A) 210,000 B) 33375.7	6	A) 148,800 B) 23649.1	4	A) 29,800 B) 4736.2	9	A) 66,300 B) 10537.2	10	A) 77,500 B) 12317.2	6	A) 67,750 B) 10767.6	42	A) 618,450 B) 98291.5
1956			1	A) 42,000 B) 6675.1	1	A) 300 B) 47.7	5	A) 247,000 B) 39256.2	6	A) 159,700 B) 25381.4	4	A) 30,800 B) 4895.1	9	A) 69,350 B) 11021.9	11	A) 79,350 B) 12611.2	6	A) 71,550 B) 11371.6	43	A) 700,050 B) 111260.3
1957			1	A) 44,000 B) 6993.0	1	A) 300 B) 47.7	5	A) 255,800 B) 40654.8	6	A) 198,510 B) 31549.6	4	A) 33,220 B) 5279.7	9	A) 68,975 B) 10962.3	11	A) 85,540 B) 13595.0	6	A) 75,550 B) 12007.3	43	A) 761,895 B) 121089.5
1958			1	A) 49,000 B) 7787.7	1	A) 300 B) 47.7	5	A) 264,800 B) 42085.2	7	A) 228,822 B) 36367.1	3	A) 33,220 B) 5279.7	8	A) 67,875 B) 10787.5	10	A) 85,290 B) 13555.3	7	A) 98,100 B) 15591.2	42	A) 827,407 B) 131501.4
1959			1	A) 49,000 B) 7787.7	1	A) 300 B) 47.7	5	A) 265,000 B) 42117.0	7	A) 254,272 B) 40411.9	3	A) 33,220 B) 5279.7	6	A) 63,610 B) 10109.7	10	A) 90,960 B) 14456.4	7	A) 96,900 B) 15400.5	40	A) 853,262 B) 135610.6
1960			1	A) 49,000 B) 7787.7	2	A) 47,800 B) 7596.9	6	A) 297,000 B) 47202.8	7	A) 260,820 B) 41452.6	3	A) 36,120 B) 5740.6	6	A) 64,250 B) 10211.4	11	A) 95,070 B) 15109.7	8	A) 100,200 B) 15925.0	44	A) 950,260 B) 151026.7
1961	1	A) 8,500 B) 1350.9	1	A) 49,000 B) 7787.7	2	A) 47,800 B) 7596.9	6	A) 297,000 B) 47202.8	7	A) 260,820 B) 41452.6	3	A) 37,420 B) 5947.2	6	A) 70,750 B) 11244.4	10	A) 90,670 B) 14410.4	7	A) 98,800 B) 15702.5	43	A) 961,760 B) 152854.4
1962	1	A) 8,500 B) 1350.9	1	A) 50,000 B) 7946.6	2	A) 45,300 B) 7199.6	6	A) 304,500 B) 48394.8	7	A) 279,170 B) 44369.0	3	A) 37,420 B) 5947.2	6	A) 69,720 B) 11080.7	10	A) 94,560 B) 15028.6	7	A) 98,800 B) 15702.5	43	A) 987,970 B) 157019.9
1963	1	A) 8,500 B) 1350.9	1	A) 50,000 B) 7946.6	2	A) 45,300 B) 7199.6	6	A) 305,000 B) 48474.2	8	A) 305,470 B) 48548.9	3	A) 40,420 B) 6424.0	6	A) 70,010 B) 11126.8	8	A) 88,800 B) 14113.1	7	A) 99,200 B) 15766.0	42	A) 1012,700 B) 160950.4
1964	1	A) 8,500 B) 1350.9	2	A) 50,000 B) 7946.6	1	A) 45,000 B) 7151.9	6	A) 318,700 B) 50651.6	7	A) 306,900 B) 48776.2	3	A) 41,300 B) 6563.9	6	A) 70,010 B) 11126.8	7	A) 86,700 B) 13779.4	7	A) 103,400 B) 16433.6	40	A) 1052,510 B) 167277.5
1965	1	A) 8,500 B) 1350.9	2	A) 72,000 B) 11443.1	1	A) 45,000 B) 7151.9	6	A) 328,700 B) 52240.9	7	A) 322,400 B) 51239.7	3	A) 41,300 B) 6563.9	6	A) 69,650 B) 11069.6	7	A) 93,300 B) 14828.3	7	A) 102,300 B) 16258.7	40	A) 1083,150 B) 172147.2
1966	1	A) 8,500 B) 1350.9	2	A) 72,000 B) 11443.1	1	A) 45,000 B) 7151.9	6	A) 373,700 B) 59392.9	7	A) 324,400 B) 51557.5	3	A) 43,000 B) 6834.1	6	A) 75,550 B) 12007.3	7	A) 95,300 B) 15146.2	7	A) 102,300 B) 16258.7	40	A) 1138,750 B) 180983.8
1967	1	A) 11,500 B) 1827.7	2	A) 72,000 B) 11443.1	1	A) 45,000 B) 7151.9	6	A) 401,200 B) 63763.5	7	A) 352,400 B) 56007.6	3	A) 43,000 B) 6834.1	6	A) 74,550 B) 11848.4	7	A) 98,000 B) 15575.3	8	A) 111,800 B) 17768.6	41	A) 1209,450 B) 192220.2
1968	1	A) 13,000 B) 2066.1	2	A) 70,100 B) 11141.1	1	A) 45,000 B) 7151.9	6	A) 400,400 B) 63636.4	7	A) 359,100 B) 57072.5	3	A) 44,300 B) 7040.7	6	A) 75,950 B) 12070.9	7	A) 100,000 B) 15893.2	8	A) 114,300 B) 18165.9	41	A) 1222,150 B) 194238.7
1969	1	A) 13,000 B) 2066.1	2	A) 74,600 B) 11856.3	1	A) 45,000 B) 7151.9	6	A) 449,600 B) 71455.8	7	A) 367,000 B) 58328.0	2	A) 47,600 B) 7565.2	6	A) 77,150 B) 12261.6	7	A) 109,500 B) 17403.0	8	A) 114,400 B) 18181.8	40	A) 1297,850 B) 206269.8
1970	1	A) 13,000 B) 2066.1	2	A) 77,100 B) 12253.6	1	A) 45,000 B) 7151.9	6	A) 460,600 B) 73204.1	7	A) 389,200 B) 61856.3	2	A) 47,500 B) 7549.3	6	A) 79,350 B) 12611.2	7	A) 112,000 B) 17800.4	8	A) 128,500 B) 20422.7	40	A) 1352,250 B) 214915.7

TABLE G-5 (cont'd)

YEAR	NEWFOUNDLAND		NOVA SCOTIA		NEW BRUNSWICK		QUEBEC		ONTARIO		MANITOBA		SASKATCHEWAN		ALBERTA		B.C./NWT		CANADA	
	Nos.	Cap.	Nos.	Cap.	Nos.	Cap.	Nos.	Cap.	Nos.	Cap.	Nos.	Cap.	Nos.	Cap.	Nos.	Cap.	Nos.	Cap.	Nos.	Cap.
1971	1	A) 13968.2 B) 2,220	3	A) 160257.2 B) 25,470	1	A) 119988.4 B) 19,070	7	A) 577416.8 B) 91,770	7	A) 389160.2 B) 61,850	2	A) 48511.3 B) 7,710	4	A) 65248.0 B) 10,370	7	A) 172149.1 B) 27,360	8	A) 128577.0 B) 20,435	40	A) 1675245.0 B) 266,250
1972	1	A) 13968.2 B) 2,220	3	A) 178441.1 B) 28,360	1	A) 119988.4 B) 19,070	7	A) 587421.1 B) 93,360	7	A) 410741.8 B) 65,280	2	A) 48511.3 B) 7,710	4	A) 65248.0 B) 10,370	7	A) 173596.2 B) 27,590	8	A) 132100.5 B) 20,995	40	A) 1730048.3 B) 274,960
1973	2	A) 114011.0 B) 18,120	3	A) 179951.2 B) 28,600	1	A) 119988.4 B) 19,070	7	A) 608373.5 B) 96,690	7	A) 413636.0 B) 65,740	2	A) 48511.3 B) 7,710	4	A) 65248.0 B) 10,370	7	A) 174225.4 B) 27,690	8	A) 133107.2 B) 21,155	41	A) 1857020.8 B) 295,140
1974	2	A) 114011.0 B) 18,120	3	A) 180454.6 B) 28,680	1	A) 119988.4 B) 19,070	7	A) 646503.0 B) 102,750	7	A) 522613.5 B) 83,060	2	A) 48385.4 B) 7,690	4	A) 67890.6 B) 10,790	7	A) 177937.7 B) 28,280	8	A) 145880.0 B) 23,185	41	A) 2023003.8 B) 321,520
1975	2	A) 114011.0 B) 18,120	3	A) 181775.9 B) 28,890	1	A) 119988.4 B) 19,070	7	A) 643986.2 B) 102,350	7	A) 540231.1 B) 85,860	1	A) 30012.8 B) 4,770	3	A) 37500.3 B) 5,960	7	A) 262376.4 B) 41,700	8	A) 152864.1 B) 24,295	38	A) 2082652.0 B) 331,000
1976	2	A) 114011.0 B) 18,120	3	A) 181964.6 B) 28,920	1	A) 249918.2 B) 39,720	7	A) 645685.0 B) 102,620	7	A) 549543.2 B) 87,340	1	A) 30012.8 B) 4,770	2	A) 40268.8 B) 6,400	6	A) 269675.1 B) 42,860	8	A) 166832.3 B) 26,515	37	A) 2247942.8 B) 357,270
1977	2	A) 114011.0 B) 18,120	3	A) 184859.0 B) 29,380	1	A) 249918.2 B) 39,720	7	A) 645685.0 B) 102,620	7	A) 537920.8 B) 85,520	1	A) 30012.8 B) 4,770	2	A) 40268.8 B) 6,400	6	A) 276659.2 B) 43,970	8	A) 167964.9 B) 26,695	37	A) 2247299.7 B) 357,195
1978	1	A) 13968.2 B) 2,220	3	A) 184859.0 B) 29,380	1	A) 249918.2 B) 39,720	7	A) 618126.1 B) 98,240	8	A) 647178.1 B) 102,890	1	A) 30012.8 B) 4,770	2	A) 53293.2 B) 8,470	6	A) 281063.6 B) 44,670	8	A) 184575.8 B) 29,335	37	A) 2262995.0 B) 359,695
1979	1	A) 13968.2 B) 2,220	3	A) 184859.0 B) 29,380	1	A) 249918.2 B) 39,720	7	A) 617308.1 B) 98,110	7	A) 587989.2 B) 93,480	1	A) 30012.8 B) 4,770	2	A) 53293.2 B) 8,470	6	A) 280371.5 B) 44,560	8	A) 171394.0 B) 27,240	35	A) 2189114.2 B) 347,950
1980	1	A) 14975.0 B) 2,380	2	A) 101993.3 B) 16,210	1	A) 249918.2 B) 39,720	7	A) 619195.7 B) 98,410	7	A) 587863.4 B) 93,460	1	A) 30012.8 B) 4,770	2	A) 49266.3 B) 7,830	6	A) 281378.2 B) 44,720	8	A) 171394.0 B) 27,240	35	A) 2105996.9 B) 334,740
1981	1	A) 14975.0 B) 2,380	2	A) 101993.3 B) 16,210	1	A) 237617.4 B) 37,765	7	A) 590063.8 B) 93,780	7	A) 585536.1 B) 93,090	1	A) 30012.8 B) 4,770	2	A) 49266.3 B) 7,830	6	A) 285593.8 B) 45,390	8	A) 175987.2 B) 27,970	35	A) 2071045.7 B) 329,185
1982	1	A) 13968.2 B) 2,220	2	A) 104321.4 B) 16,580	1	A) 249981.2 B) 39,730	6	A) 533687.4 B) 84,820	7	A) 580818.6 B) 92,340	1	A) 30012.8 B) 4,770	2	A) 54174.1 B) 8,610	7	A) 347230.3 B) 55,186	8	A) 179447.8 B) 28,520	35	A) 2093641.8 B) 332,776
1983		— —	2	A) 104321.4 B) 16,580	1	A) 249981.2 B) 39,730	4	A) 387083.9 B) 61,520	6	A) 521906.5 B) 82,974		— —	2	A) 54174.1 B) 8,610	6	A) 382528.4 3) 60,796	7	A) 174665.9 B) 27,760	28	A) 1874661.4 B) 297,970
1984		— —	2	A) 106930.0 B) 17,000	1	A) 250342.0 B) 39,800	4	A) 387464.0 B) 61,600	6	A) 528989.0 B) 84,100		— —	2	A) 49062.0 B) 7,800	6	A) 412624.0 B) 65,600	7	A) 173604.0 B) 27,600	28	A) 1909015.0 B) 303,500

Notes: Data for 1940 to 1970 published in barrels per day, and for 1971 to 1984 in cubic meters per day. Conversion to the other measure is made by dividing or multiplying by 6.292. Original published figures for total refining capacity in Canada do not add up to the published sum of the provincial figures in thirteen years. Differences are always less than 2 per cent and original published figures have been used.

Sources: For 1940 to 1981, *Petroleum Processing in Canada*, Ottawa, Energy, Mines and Resources, and previous publication *Operators List No. 5* from same department, various issues, 1955 to 1981. Petrosar is excluded from 1977. For 1982 and 1983, Canadian Petroleum Association, *Statistical Handbook*, Calgary, CPA, updated annually. For 1984, data supplied by Energy, Mines and Resources.

TABLE G-6
Refinery Crude Oil Runs*, Product Imports and Product Exports as a Per Cent of the Apparent Canadian Consumption of Crude Oil and Products (ACCOP) 1947-1984

Year	Refinery Crude Oil Runs	Product Imports	Product Exports
	ACCOP %	ACCOP %	ACCOP %
1947	83.6	17.6	1.3
1948	81.3	20.7	1.9
1949	85.3	15.4	0.7
1950	84.4	15.6	0.3
1951	82.3	17.7	—
1952	86.3	14.5	0.8
1953	87.6	12.4	—
1954	90.1	10.1	0.2
1955	84.0	16.4	0.4
1956	87.0	13.9	1.0
1957	88.3	12.8	1.1
1958	89.5	10.9	0.4
1959	88.0	12.7	0.7
1960	89.5	11.5	1.0
1961	91.4	9.1	0.6
1962	92.3	9.0	1.3
1963	92.4	9.1	1.5
1964	90.7	11.6	2.3
1965	86.3	14.3	0.6
1966	87.0	13.6	0.6
1967	85.7	15.0	0.7
1968	85.6	15.3	1.0
1969	86.0	14.8	0.8
1970	87.6	13.5	1.1
1971	92.3	10.1	2.4
1972	97.0	8.9	5.9
1973	99.6	7.2	6.8
1974	101.4	4.7	6.2
1975	102.8	2.4	5.2
1976	101.3	2.1	3.5
1977	101.8	2.6	4.3
1978	104.6	2.9	7.5
1979	104.4	1.7	6.1
1980	104.6	2.4	7.0
1981	104.7	2.6	7.2
1982	103.1	3.1	6.2
1983	105.3	4.0	9.3
1984	103.5	6.5	10.0

Note: *Includes condensate and pentanes plus propane/butane/ mixes.

Source: Canadian Petroleum Association, *Statistical Handbook*, Section VII, Table 1.

TABLE G-7

Canadian Energy Consumption and Percentage Share of Petroleum, 1950-1984

Year	Canadian Energy Consumption Petajoules	Petroleum Share of Canadian Energy Consumption %
1950	2898	28.6
1955	3555	42.3
1960	4045	45.1
1965	5186	48.4
1970	7069	46.7
1975	8412	45.0
1980	9839	41.4
1984	9635	33.0

Source: Canadian Petroleum Association, *Statistical Handbook*, Section VII, Table 4, June 1985.

TABLE G-8

Rank Position of the four Majors and Other Leading Refiners by Capacity, Canada & Regions, Selected Years, 1950 — 1984

CANADA

Firm	Rank Position 1950	1960	1970	1980	1984
Imperial Oil	1	1	1	1	1
Gulf(a)	2	2	2	3	2
Texaco(b)	3	4	(5)	(5)	(7)
Shell	4	3	3	2	3
BP(d)			4		
Irving				4	4
Petro-Canada					(5)

ATLANTIC

Firm	Rank Position 1960	1970	1980	1984
Imperial Oil	1	1	2	2
Irving	2	2	1	1
New Brunswick Oil	3			
Texaco		3		3
Ultramar(c)		4		4

TABLE G-8 (cont'd)

QUEBEC

Firm	Rank Position 1960	1970	1980	1984
Imperial Oil	1	2	4	
Shell	2	1	1	1
Texaco	3			
Gulf	4	4	4	
BP(d)		3		
Ultramar			2	2
Petrofina(d)			3	
Petro-Canada				3

ONTARIO

Firm	Rank Position 1960	1970	1980	1984
Imperial Oil	1	1	1	1
Gulf	2	3	4	
Canadian Oil(e)	3			
Texaco	4	4	3	2
Shell		2	2	
Suncor				3
Petro-Canada				4

PRAIRIES

Firm	Rank Position 1960	1970	1980	1984
Imperial Oil	1	1	1	1
Gulf	2	2	2	2
Shell(f)	3	3	4	3
Consumers' Co-operative	4	4	3	4

TABLE G-8 (cont'd)

BC/NWT(g)

Firm	Rank Position 1960	1970	1980	1984
Imperial Oil	1	2	2	1
Shell	2	3	4	4
Gulf(h)	3	1	1	2
Chevron	3	4	3	3

Notes:

(a) Gulf is represented through British American Oil in which it had minority ownership in 1946 and majority ownership by 1966. The name change took place in 1968.

(b) Texaco is represented through McColl Frontenac in which it had a controlling interest by 1938. The name was changed to Texaco Canada Ltd. in 1959. Texaco owned Regent Refining Ltd. in Ontario from 1957.

(c) Known as Golden Eagle in early years.

(d) Acquired by Petro-Canada.

(e) Acquired by Shell.

(f) Shell represented by North Star in 1960 which Shell later acquired.

(g) Includes Imperial's Norman Wells refinery in the NWT.

(h) Gulf refinery was 49 per cent owned by Petro-Canada between 1982 and 1985.

H

Comparison of Market Shares of Independents

(This appendix relates to Tables 3 and 4 in Chapter XIV, Structure of Retail Marketing)

Several witnesses stated that the independent marketers did particularly well outside the larger cities. These observations could be easily tested if Tables 3 and 4 in Chapter XIV were directly comparable. They differ, however, apart from the obvious differences in geographic coverage, in that the shares in Table 3 relate to sales by retail outlets whereas those in Table 4 relate to all gasoline sales, of which those through retail outlets represent about 84 per cent. It is likely that the independents' share of sales to the farm sector and to commercial and industrial customers is far less than their share through retail outlets. The independents' market shares with respect to total gasoline sales (Table 4) should, therefore, be lower than those for sales through retail outlets (Table 3). The market shares in Table 4 can be converted to estimated market shares of sales through retail outlets by assigning market shares to the independents for farm, commercial and industrial customers. Assuming that these shares are zero provides an upper estimate of the independents' market shares of sales through retail outlets. This estimate for Canada in 1984 is 15.2 per cent (12.8/0.842), which is somewhat higher than the comparable figure, 14.5 per cent, in Table 3, and suggests that the independents' market shares in the 12 cities for which Kent Marketing Services data were placed in evidence (see Appendix Tables J-1 to J-3) are, taken as a whole, representative of their overall share of Canadian sales. Furthermore, the information in Tables 3 and 4 suggests that over the period 1981 through 1984 the independents appear to have lost ground outside of the 12 urban centers covered in Table 3.

I

Growth in Capacity of Retail Networks

(This appendix relates to Chapter XIV, Structure of Retail Marketing)

Kent Marketing Services data on six large urban areas for 1974 to 1980 (see Appendix Table J-11) show that the increase in pump capacity of self-serve outlets required to keep total industry capacity constant ranged from 1.5 to 2.7 times that of full-service outlets being replaced, with the median city increase required being 1.7. The major refiner-marketers' required median city pump capacity increase was slightly higher at 2.0; with Imperial Oil at 3.1 and Gulf at 2.8, and Shell and Texaco both at 1.7. For the industry, excluding these four majors, it was 1.3 because of the relatively smaller number of outlets closed by this group of marketers.

These figures suggest that the closure of full-service outlets and their replacement by the development of larger self-serve facilities has resulted in the expansion of capacity to sell gasoline in large urban areas between 1974 and 1980 rather than the expected contraction.

J

Tabular Material Related to Retail Gasoline Market

(The tables presented in this appendix are discussed in Chapter XIV, The Retail Gasoline Market).

TABLE J-1

Retail Gasoline Market Shares in Twelve Urban Areas, 1974[12]

	St. John's	Halifax-Dartmouth	Saint John	Montreal	Hull	Ottawa	Oshawa-Whitby	Greater Toronto[1]	Winnipeg	Regina	Edmonton	Vancouver	Total (Wgt. Avg.)
Imperial[2]	40.5	24.5	18.0	17.5	13.5	12.2	12.2	15.8	17.9	22.1	26.2	23.0	18.4
Shell[3]	1.3	17.0	13.2	17.2	17.9	17.0	15.6	19.0	21.4	14.9	14.2	12.9	16.7
Gulf[4]	17.4	12.8	5.8	9.1	3.4	6.5	9.1	13.7	18.0	18.1	16.2	14.4	12.5
Texaco[5]	10.8	14.1	6.8	16.0	18.1	11.0	11.0	10.8	10.6	11.2	10.2	7.1	11.9
4 Majors[13]	70.0	68.4	43.8	59.7	53.0	46.7	47.9	59.3	68.0	66.4	66.9	57.4	59.6
BP				12.6	12.4	9.4	13.4	13.3					8.6
Sunoco[6]				6.5	7.2	6.6	4.9	7.4					4.7
Fina		16.5	4.2	8.1	4.8	3.2	1.9	3.3					4.0
Chevron[7]												19.2	2.4
Irving	15.7	14.5	48.9	2.1									1.7
Pacific Pet[9]									4.6	3.7	5.9	4.9	1.4
Ultramar[10]	14.4			1.9	6.0	0.8	2.7	1.3					1.3
Co-op[8]									3.5	10.2	3.2	0.3	0.7
Husky									1.1	1.7	3.0		0.3
Union Oil											0.6	1.0	0.2
Petro-Canada													
Turbo[11]													
Regionals[13]	30.1	31.0	53.1	31.3	30.5	20.0	22.9	25.4	9.2	15.6	12.7	25.5	25.1
Independents	—	0.7	3.1	9.0	16.6	33.3	29.2	15.3	22.8	18.0	20.4	17.2	15.3
Total[13]	100.1	100.1	100.0	100.0	100.1	100.0	100.0	100.0	100.0	100.0	100.0	100.1	100.0

Notes:

1. Greater Toronto includes Metro Toronto, Ajax/Pickering, Vaughan/Markham, Brampton/Bramalea, Mississauga.
2. Imperial includes Esso, Econo, Gain, Champlain, Home.
3. Shell includes Beaver, Gas Mart, Savex, Alouette.
4. Gulf includes Royalite and Henderson.
5. Texaco includes Regent, Independent.
6. Sunoco includes Pronto, Baron.
7. Chevron includes Standard.
8. Co-op (in the West) includes Tempo.
9. Pacific Pet includes Discount Gas (in Winnipeg, Edmonton and Vancouver).
10. Ultramar includes Golden Eagle, Arrow.
11. Turbo was included with the independents until it opened its refinery in 1982.
12. The above data are based on ownership information effective December 31, 1974.
13. The subtotals for Majors and Regionals and the Total may not add to the sum of their component parts due to rounding.

Source: Kent Marketing Services Limited data found in Exhibit M-77B.

TABLE J-2

Retail Gasoline Market Shares in Twelve Urban Areas, 1980[13]

	St. John's	Halifax-Dartmouth	Saint John	Montreal	Hull	Ottawa	Oshawa-Whitby	Greater Toronto[1]	Winnipeg	Regina	Edmonton	Vancouver	Total (Wgt. Avg.)
Imperial[2]	38.0	25.9	18.3	15.3	8.1	12.0	14.9	20.0	18.6	23.0	24.8	23.8	19.3
Shell[3]	—	13.1	7.2	16.7	13.4	15.0	12.0	19.8	22.1	12.1	15.1	14.7	16.9
Gulf[4]	17.7	10.6	5.3	8.7	3.2	8.0	6.7	12.5	16.9	16.5	14.7	14.9	11.8
Texaco[5]	8.5	12.2	3.6	13.9	19.1	12.6	19.8	10.2	7.8	9.7	7.4	4.8	10.5
4 Majors[14]	64.2	61.8	34.4	54.6	43.8	47.6	53.4	62.6	65.4	61.2	62.0	58.1	58.4
BP				12.6	14.2	12.3	11.9	12.5					8.1
Sunoco[6]				7.1	6.7	4.9	8.4	6.3					4.2
Fina		18.4	3.0	7.7	8.0	4.1	1.9	4.0					4.1
Chevron[7]												22.1	2.9
Irving	19.1	18.2	54.5	1.4									1.7
Pacific Pet													
Ultramar[9]	14.0			2.8	4.4	0.7	5.8	1.2					1.6
Co-op[8]									6.7	9.2	4.3	0.5	1.2
Husky[11]									2.3	2.4	4.5	0.8	0.7
Union Oil													
Petro-Canada[10]									6.7	6.0	8.1	5.1	1.9
Turbo[12]													
Regionals[14]	33.1	36.6	57.5	31.6	33.3	22.0	28.1	24.0	15.7	17.6	16.9	28.5	26.4
Independents	2.7	1.6	8.0	13.8	22.9	30.4	18.4	13.4	18.9	21.2	21.1	13.4	15.2
Total[14]	100.0	100.0	99.9	100.0	100.0	100.0	99.9	100.0	100.0	100.0	100.0	100.1	100.0

Notes:

1. Greater Toronto includes Metro Toronto, Ajax/Pickering, Vaughan/Markham, Brampton/Bramalea, Mississauga.
2. Imperial includes Esso, Econo, Gain, Champlain, Home.
3. Shell includes Beaver, Gas Mart, Savex, Allouette.
4. Gulf includes Royalite and Henderson.
5. Texaco includes Regent, Independent.
6. Sunoco includes Pronto, Baron.
7. Chevron includes Standard.
8. Co-op (in the West) includes Tempo.
9. Ultramar includes Golden Eagle, Arrow and XL.
10. Petrocan includes Pacific Pet and Discount Gas (in Winnipeg, Edmonton and Vancouver).
11. Husky includes Roco.
12. Turbo was included with the Independents until it opened its refinery in 1982.
13. The above data are based on ownership information effective December 31, 1980.
14. The subtotals for Majors and Regionals and the Total may not add to the sum of their component parts due to rounding.

Source: Kent Marketing Services Limited data found in Exhibit M-77B.

TABLE J-3

Retail Gasoline Market Shares in Twelve Urban Areas, 1984[13]

	St. John's	Halifax-Dartmouth	Saint John	Montreal	Hull	Ottawa	Oshawa-Whitby	Greater Toronto[1]	Winnipeg	Regina	Edmonton	Vancouver	Total (Wgt. Avg.)
Imperial[2]	32.8	22.2	16.2	13.7	4.1	9.5	8.1	14.5	15.1	21.7	22.0	17.2	15.4
Shell[3]	—	13.7	8.7	15.5	13.1	15.9	10.6	20.3	23.4	15.0	15.6	16.0	17.1
Gulf[4]	17.0	9.3	1.9	8.4	5.6	10.2	6.9	12.0	14.2	13.9	14.8	14.0	11.3
Texaco[5]	7.3	10.7	1.8	12.5	13.1	11.6	17.3	9.3	6.7	8.4	8.9	5.1	9.6
4 Majors[14]	57.1	55.8	28.6	50.2	36.0	47.3	42.9	56.1	59.4	59.0	61.3	52.4	53.5
BP													
Sunoco[6]				8.0	6.3	7.0	5.3	7.9					5.1
Fina													
Chevron[7]												24.4	3.3
Irving	22.4	20.5	55.2	1.1									1.7
Pacific Pet													
Ultramar[9]	15.4			6.3	11.6	1.2	2.5	1.8					2.4
Co-op[8]									3.9	6.9	2.0	0.4	0.5
Husky[11]									1.8	1.6	3.2	0.8	0.5
Union Oil													
Petro-Canada[10]	4.9	23.5	8.4	21.3	21.7	18.5	15.9	19.8	9.8	8.7	11.1	11.3	17.2
Turbo[12]									3.8	17.5	6.5	1.4	1.3
Regionals[14]	42.8	44.0	63.6	36.8	39.6	26.7	23.7	29.5	19.3	34.6	22.7	37.9	32.2
Independents	0.1	0.2	7.8	13.0	24.3	26.0	33.4	14.3	21.4	6.4	16.0	9.7	14.3
Total[14]	100.0	100.0	100.0	100.0	99.9	100.0	100.0	99.9	100.1	100.0	100.0	100.0	100.2

Notes:

1. Greater Toronto includes Metro Toronto, Ajax/Pickering, Vaughan/Markham, Brampton/Bramalea, Mississauga.
2. Imperial includes Esso, Econo, Gain, Champlain, Home.
3. Shell includes Beaver, Gas Mart, Savex, Allouette.
4. Gulf includes Royalite and Henderson.
5. Texaco includes Regent, Independent.
6. Sunoco includes Pronto, Baron.
7. Chevron includes Standard.
8. Co-op (in the West) includes Tempo.
9. Ultramar includes Golden Eagle, Arrow, XL, Lyle and Spur in Quebec and Ottawa.
10. Petrocan includes Pacific Pet and Discount Gas (in Edmonton and Vancouver), Merit, Pay-N-Save, BP and Fina.
11. Husky includes Roco.
12. The Turbo outlets in Ontario which were sold to Alberta Gas Chemicals Ltd. in December, 1984 are included with the Independents.
13. The above data are based on ownership information effective December 31, 1984.
14. The subtotals for Majors and Regionals and the Total may not add to the sum of their component parts due to rounding.

Source: Kent Marketing Services Limited data found in Exhibit M-783.

TABLE J-4

Average Annual Sales by Major-Brand and Second-Brand Outlets, 1973 (000's of gallons)

	Major Second-Brand Outlets	Major-Brand Outlets
Montreal	188	278
Greater Toronto	517	336
Winnipeg	352	269
Regina	643*	276
Edmonton	402	276
Vancouver	302	240

* Indicates that 1974 data was used.

Source: Kent Marketing Services Limited data found in Exhibit M-77.

TABLE J-5

Suncor Second-Brand Outlets, 1972-1982

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Outlets	19	35	40	43	47	42	43	37	38	42	59
Total Volume (million gallons)	0.4	15.6	27.3	26.0	25.1	24.9	31.9	27.8	25.0	30.3	30.8

Source: Exhibit M-560, Table 6.

TABLE J-6

Volume of Industry Retail Gasoline Sales, 1950-1980

	1950		1960		1970		1980
Millions of gallons	1062		2452		4510		6933
Average annual growth in demand during decade		8%		6%		4%	

Sources: Imperial Oil Limited estimates, 1950-1960. Statistics Canada, Catalogue No. 45-208, 1970. Statistics Canada, Catalogue No. 57-003, 1980, (Exhibit R-17, Vol. C, Book II, Tab X-6).

TABLE J-7(a)

Number of Outlets and Average Volume By Category of Retail Gasoline Outlet in Six Urban Markets, 1974, 1980 and 1984 (Thousands of gallons)

	Major Brands		Major Second-brands		Regional Refiners		Regional Second-brands		Independents		Industry	
	(#)	Vol.	(#)	Vol.	(#)	Vol.	(#)	Vol.	(#)	Vol.	(#)	Vol.
Montreal												
1974	(901)	309	(73)	186	(626)	239	(4)	920	(213)	206	(1817)	269
1980	(740)	473	(11)	652	(589)	343	(4)	1018	(231)	391	(1575)	415
1984	(668)	386	(9)	358	(503)	334	(71)	328	(265)	255	(1516)	343
Ottawa												
1974	(130)	328	(10)	422	(90)	223	(—)	—	(65)	515	(295)	340
1980	(115)	447	(5)	267	(74)	330	(—)	—	(69)	490	(263)	422
1984	(104)	496	(4)	355	(76)	382	(2)	409	(70)	415	(256)	437
Toronto												
1974	(647)	368	(28)	722	(313)	299	(4)	976	(119)	540	(1111)	378
1980	(440)	630	(48)	788	(267)	398	(10)	428	(115)	562	(880)	557
1984	(389)	574	(45)	736	(216)	455	(39)	667	(119)	564	(808)	554
Winnipeg												
1974	(279)	286	(8)	502	(39)	290	(—)	—	(74)	380	(400)	308
1980	(165)	548	(5)	688	(67)	321	(8)	119	(46)	591	(291)	493
1984	(155)	498	(—)	—	(75)	320	(4)	254	(44)	631	(278)	468
Edmonton												
1974	(242)	335	(7)	645	(51)	320	(—)	—	(66)	396	(366)	350
1980	(174)	705	(3)	592	(47)	678	(5)	417	(67)	632	(296)	678
1984	(198)	527	(—)	—	(73)	489	(4)	507	(68)	400	(345)	493
Vancouver												
1974	(419)	263	(77)	319	(226)	258	(1)	1554	(77)	525	(800)	294
1980	(285)	596	(18)	731	(169)	516	(7)	436	(84)	504	(563)	561
1984	(263)	546	(7)	538	(167)	593	(16)	462	(57)	478	(510)	551
Total												
1974	(2618)	317	(203)	350	(1345)	260	(9)	1015	(614)	385	(4789)	312
1980	(1919)	553	(90)	719	(1213)	390	(34)	425	(612)	491	(3868)	495
1984	(1777)	483	(65)	639	(1112)	409	(136)	445	(623)	395	(3713)	447

Notes:

1. Toronto covers Metro Toronto only.
2. *Majors* are Imperial, Gulf, Shell and Texaco.
3. *Regional Refiners* include Petro-Canada.

Source: Kent Marketing Services Limited data found in Exhibits M-77A, M-77B and M-783.

TABLE J-7(b)

Number of Outlets and Average Volume By Category of Retail Gasoline Outlet, Adjusted for Closed Outlets and Outlets with Unreported Volumes, in Six Urban Markets, 1974 and 1980

(Thousands of gallons)

	Major Brands		Major Second-brands		Regional Refiners		Regional Second-brands		Independents		Industry	
	(#)	Vol.	(#)	Vol.	(#)	Vol.	(#)	Vol.	(#)	Vol.	(#)	Vol.
Montreal												
1974	(818)	336	(30)	357	(559)	261	(4)	920	(179)	245	(1590)	301
1980	(708)	490	(11)	652	(571)	353	(3)	1075	(214)	416	(1507)	430
Ottawa												
1974	(124)	342	(8)	502	(83)	238	(—)	—	(63)	528	(278)	358
1980	(106)	479	(4)	318	(71)	343	(—)	—	(60)	557	(241)	456
Toronto												
1974	(582)	402	(26)	743	(297)	311	(3)	1302	(102)	617	(1010)	408
1980	(426)	648	(46)	811	(256)	411	(9)	487	(105)	615	(842)	579
Winnipeg												
1974	(250)	312	(6)	522	(36)	313	(—)	—	(73)	385	(365)	330
1980	(161)	560	(5)	688	(61)	347	(4)	226	(41)	660	(272)	525
Edmonton												
1974	(220)	396	(7)	645	(46)	350	(—)	—	(61)	424	(334)	400
1980	(166)	732	(2)	822	(45)	707	(5)	417	(56)	750	(274)	726
Vancouver												
1974	(385)	280	(73)	335	(215)	270	(1)	1554	(72)	562	(746)	311
1980	(278)	611	(17)	761	(160)	540	(7)	436	(75)	563	(537)	586
Total												
1974	(2379)	346	(150)	441	(1236)	278	(8)	1142	(550)	426	(4323)	342
1980	(1739)	572	(85)	750	(1164)	404	(28)	487	(551)	541	(3673)	518

Notes:

1. Toronto covers Metro Toronto only.
2. *Majors* are Imperial Oil, Gulf, Shell and Texaco.
3. *Regional Refiners* include Petro-Canada.

Source: Kent Marketing Services Limited data found in Exhibits M-77A, M-77B and M-783.

TABLE J-8

Major-Brand and Industry Retail Gasoline Outlets: Total and Self-Serve in 1970, 1973, 1975, 1980 and 1982

		1970	May 1973	Nov. 1975	1980	1982
Imperial	Total	6,752	n.a.	5,457	4,386	n.a.
	Self-serve	—	6	230	478	527
Shell	Total	5,856	n.a.	4,609	3,626	n.a.
	Self-serve	6	40	269	520	536
Gulf	Total	5,723	n.a.	4,451	2,770	n.a.
	Self-serve	n.a.	14	92	335	396
Texaco	Total	4,600*	n.a.	4,444	3,538	n.a.
	Self-serve	n.a.	1	192	461	472
4 Majors	Total	22,931	n.a.	18,961	14,320	n.a.
	Self-serve	n.a.	61	783	1,794	1,931
Industry	Total	35,703	n.a.	29,986	23,952	n.a.
	Self-serve	n.a.	93	1,231	2,758	2,961

* Estimate

n.a. Not Available.

Sources: 1. Exhibit S-5H, Table 2 which is based on data found in *National Petroleum News Factbook* and *Oilweek*.
2. *Automotive Marketer*, various issues, as reported in Exhibit M-451, Vol. C, Book II at Tab X-7.

TABLE J-9

Retail Gasoline Outlets: Total and Self-Serve, By Company in 1976 and 1981

		1976	1981	% inc. or(dec.)	Self-serve as % outlets
		(#)	(#)	(%)	1981 (%)
Gulf	Total	4,451	2,765	(38)	
	Self-Serve	178	361	103	13
Imperial	Total	5,457	4,125	(24)	
	Self-Serve	298	496	66	12
Shell	Total	4,599	3,675	(20)	
	Self-Serve	365	536	47	15
Texaco	Total	4,444	3,005	(32)	
	Self-Serve	340	493	45	16
4 Majors	Total	18,951	13,570	(28)	
	Self-Serve	1,181	1,886	60	14
BP	Total	1,879	1,658	(12)	
	Self-Serve	176	230	31	14
Chevron	Total	436**	343	(21)**	
	Self-Serve	37	58	57	17
Fed. Co-op	Total	397	404	2	
	Self-Serve	60	96	60	24
Husky	Total	261	326	25	
	Self-Serve	22	29	32	9
Pacific Petroleum* - Petro-Canada	Total	400	363	(9)	25
	Self-Serve	61	91	(49)	
Petrofina*	Total	1,462	941	(36)	
	Self-Serve	32	104	225	11
Sunoco	Total	1,105	921	(17)	
	Self-Serve	157	194	24	21
Ultramar	Total	610	875	43	
	Self-Serve	18	14	(22)	2
Total Regional Refiners	Total	6,550	5,831	(11)	
	Self-Serve	563	816	45	14

TABLE J-9 (cont'd)

Retail Gasoline Outlets: Total and Self-Serve, By Company in 1976 and 1981

		1976	1981	% inc. or(dec.)	Self-serve as % outlets
		(#)	(#)	(%)	1981 (%)
Caloil	Total	133	80	(40)	
	Self-Serve	2	2	0	3
Canadian Tire	Total	62	72	16	
	Self-Serve	39	59	51	82
Mohawk	Total	196	257	31	
	Self-Serve	18	31	72	12
Pioneer	Total	37	60	62	
	Self-Serve	13	6	(54)	10
Top Valu	Total	16	107	569	
	Self-Serve	n.a.	4	n.a.	4
Turbo	Total	219	289	32	
	Self-Serve	9	3	(67)	1
Total Reporting Independents	Total	663	865	30	
	Self-Serve	81	105	30	12

* Petro-Canada acquired Pacific Petroleum in 1979 and Petrofina in 1981.

** In this case 1977 data was used.

Source: See Exhibit R-94, pp. 104-105 which is based on various editions of *Automotive Marketer*.

TABLE J-10

Imperial Oil's Estimate of Equilibrium Price[1] Differentials in 1978, 1981 (3rd Quarter) to 1982 (1st Quarter) and 1983

	Cents Per Litre			Cents Per Gallon		
Offering	1978	1981/82	1983	1978	1981/82	1983
Private-Brand Self-Serve/ and Second-Brand Self-Serve[2]	X	X	X	X	X	X
Private-Brand Served/ and Second-Brand Served	X+0.22	X+0.1	X+0.1	X+1	X+0.455	X+0.455
Major-Brand Self-Serve	X+0.44	X+0 2	X+0.2	X+2	X+0.91	X+0.91
Major-Brand Served	X+0.88 to 1.1	X+0.8 to 1.2	X+0.7	X+4 to 5	X+3.64 to 5.46	X+3.18

Notes:

1. All prices are quoted relative to the price at retail for private-or-second-brand self-serve outlets which is indicated by X.
2. Imperial Oil reported that private-brand (PBD) self-serve outlets in Montreal priced the same as PBD full-service outlets because there were only a few PBD self-serve outlets in that city.

Source: Exhibit M-451, XIV-40 for 1978, Exhibit M-462, Tab 1, pp. 1592-1593 for Third Quarter 1981 to First Quarter 1982 and Exhibit M-617, tab 32 for 1983.

TABLE J-11

Implicit Increase in Pump Capacity of Self-Serve Outlets Required to Keep the Total Retail Capacity of Major Refiner Marketers — Individually and as a Group — and Other Marketers of Gasoline Constant In Selected Urban Areas, 1974 to 1980

	Montreal	Metro Toronto	Ottawa	Winnipeg	Edmonton	Vancouver
Imperial Oil	3.3	1.8	3.2	2.9	2.1	3.5
Shell	1.4	2.3	1.0	2.0	1.3	2.0
Gulf	1.6	3.6	1.2	4.4	2.0	3.7
Texaco	1.4	1.5	1.1	2.8	1.9	2.9
Majors' sub-total	1.9	2.1	1.5	2.9	1.8	3.1
Industry excl. Majors	0.8	1.4	1.4	1.1	1.0	2.1
Industry Total	1.5	1.9	1.5	2.5	1.5	2.7

Note: The above figures were derived by dividing the number of outlets (excluding self-serve) which were closed between December 31, 1974 and December 31, 1980 by the number of self-serve outlets that were opened after the end of 1974 and which remained in operation at the end of 1980.

Source: Kent Marketing Services Limited data found in Exhibit M-77B.

TABLE J-12

Volume[1] of Retail Motor Gasoline Sales In Selected Urban Areas 1974 and 1980 (In 000's of litres)

	1974	1980	Percentage (%) Change[2] 1974-80
Montreal	2,175,713	2,945,912	30.1
Metro Toronto	1,873,353	2,235,440	17.6
Ottawa	452,445	499,597	9.9
Winnipeg	547,577	647,945	16.8
Edmonton	607,358	911,800	40.1
Vancouver	1,054,720	1,440,338	30.9
Total	6,711,166	8,681,032	25.6

Notes:

1 The volume of sales are based on Kent data which have been adjusted to remove the volume of outlets which closed during the years 1974 and 1980.

2 The percentage change is calculated by taking the difference between 1980 and 1974 as a percentage of the average of the volumes in both years.

Source: Kent Marketing Services Limited Data found in Exhibit M-77B.

TABLE J-13

Number and Market Share of "Unbranded" Outlets: 1974, 1980 and 1984

	1974		1980		1984	
	(#)	%	(#)	%	(#)	%
St. John's	—	—	(1)	1.5	(1)	0.1
Halifax/ Dartmouth	—	—	—	—	—	—
Saint John	—	—	—	—	—	—
Montreal	(38)	1.6	(44)	1.7	(52)	2.0
Hull	(3)	1.5	—	—	(1)	0.3
Ottawa	(32)	12.1	(24)	9.1	(16)	4.7
Oshawa/ Whitby	(8)	7.2	(6)	4.3	(2)	0.4
Greater Toronto	(73)	6.2	(56)	4.1	(36)	2.0
Winnipeg	(8)	4.3	(14)	2.8	(4)	0.8
Regina	(7)	3.7	(6)	3.1	(3)	0.3
Edmonton	(8)	2.1	(1)	—	(11)	2.8
Vancouver	(8)	1.3	(20)	1.4	(7)	0.6

Source: Kent Marketing Services Limited data found in Exhibits M-77B and M-783.

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Gross Margins Available to Independent/Private-Brand Resellers of Heating Oil and Motor Gasoline

This Appendix provides an explanation of the data and methodology used to derive the annual (1973 to 1982) and monthly (1979 to 1983) gross margins available to independent/private-brand resellers of home heating oil and motor gasoline as shown in Appendix Tables L-1 to L-18. These tables are discussed in Chapter XVI, The Pricing of Gasoline and Chapter XVIII, The Heating Oil Sector. The annual gross margins represent the difference between retail prices and simple averages of refiner sales realizations from independent resellers. The monthly gross margins were not only based on simple average realizations data, but also on weighted (by volume) sales realizations data. Both the annual and monthly gross margin tables were converted to constant 1981 figures to adjust for inflation. The gross margins are shown in the tables in nominal and constant dollars. Annual averages of the monthly gross margins were also calculated to allow comparisons with the set of annual gross margin tables.

1. Annual Gross Margins (Tables L-1 to L-6)

This section describes the information that was used to estimate the annual gross margins available to the average reseller of home heating oil and motor gasoline in Quebec/Atlantic Canada and Ontario for 1973 to 1982. The sources of the data used are listed on Tables L-1 to L-6.

(a) Description of Data

(i) *Home heating oil or furnace oil* data on sales realizations to independent/private-brand resellers were reported by Shell and Gulf for 1973 to 1982 and by Imperial Oil for 1977 to 1980. Average annual sales realizations for the two sectors, as reported by Shell and Gulf for Ontario and Quebec/Atlantic Canada,[1] are shown on Table L-2. (The 1977 to 1980 data for Imperial Oil are not included for reasons of historical continuity. Inclusion of these data would have produced almost identical gross margin results.) The gross margins represent the difference between the annual average of Statistics Canada's monthly residential[2] retail price in the metropolitan areas of Toronto and Montreal for No. 2 furnace oil and sales realizations. These annual prices are weighted average monthly prices calculated by Statistics Canada.

The inflation-adjusted commercial/industrial (C/I) sector sales realizations data were further adjusted by deducting 1.1 in constant 1981 cents per litre for the delivery and related costs,[3] assumed to be included in C/I sector realizations, to allow comparisons with the reseller (PBD) sales realizations figures. This was necessary because the PBD figures represent FOB sales prices at the refinery rack or terminal/distribution point while the C/I sector realizations data are CIF or delivered sales prices. These adjusted figures were used to estimate the implicit wholesale margins available to independent resellers on sales of heating oil to the C/I sector. The C/I "market" consists of consumers such as large manufacturing plants, commercial buildings, institutions at all levels of government, and apartment buildings.

(ii) *Motor gasoline* sales realizations data for the regular leaded grade were reported by Shell and Gulf for 1973 to 1982, Suncor for 1974 to 1982 and Imperial Oil for 1977 to 1980. The gross margin estimates for regular leaded gasoline in 1973 to 1982 (and various sub-periods) represent the difference between retail prices for selected types of gasoline outlets in the metropolitan areas of Toronto and Montreal and the sales realizations data noted above for Ontario and Quebec/Atlantic Canada.[4] (The Imperial Oil data were excluded for historical continuity reasons. Inclusion of these data would have produced almost identical results.) The selected retail prices include: (a) Statistics Canada's annual weighted average of its monthly full-service and self-serve prices for 1973 to 1982 and 1976 to 1982, respectively and (b) simple annual averages of the Kent Marketing Services Limited retail price information obtained for Energy, Mines and Resources Canada

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1. Western Canadian reseller data were not examined because the reseller complaints were from Eastern Canada. Natural gas has been the primary heating fuel in the West.
2. Residential sales probably represented over 70 per cent of resellers' heating oil sales.
3. The June 1979 Energy, Mines and Resources Canada task force study on heating oil (see Exhibit C-198B) estimated that the delivery and marketing costs included in C/I sector realizations in 1979 amounted to 0.88 cents per litre or 1.1 in 1981 cents per litre. This was comparable to delivery costs reported by several resellers.
4. Although some complaints were received from resellers in British Columbia, the data were only sufficient to examine the gross margins of resellers in Eastern Canada.

(Kent/EM&R) in 1973 to 1979[5] for outlets categorized as (i) national refiner major-brand self-serve, (ii) national refiner second-brand full-service and (iii) independent reseller full-service. The Kent price surveys were carried out at a rate of two to six times per year. It is impossible to say whether this number of samples is adequate without knowing whether prices were volatile. The price and realizations data were adjusted to include only federal sales tax in order to standardize the data received from all companies and to allow comparisons between provinces/regions.[6]

Sales realizations data for commercial/industrial accounts and independent reseller accounts were reported by Shell and Gulf for regular leaded and regular unleaded gasoline.[7] The inflation-adjusted commercial/industrial sector sales realizations figures were further adjusted by deducting 0.4 in constant 1981 cents per litre for delivery costs[8] to allow comparisons with reseller sales realizations figures. This was required because the latter figures represent FOB refinery or storage terminal prices while the former figures are CIF or delivered prices.

Annual gross margin estimates for regular unleaded gasoline are not shown because of the lack of sufficient historical data for trend analysis.

2. Monthly Gross Margins (Tables L-7 to L-18)

Data were received from Imperial Oil, Shell, Gulf, Texaco, Petro-Canada and Suncor in response to the Commission's January 23, 1984 request for information (see Exhibit M-727) on sales to each of the smallest and largest independent/private-brand resellers of heating oil and motor gasoline (all three grades)[9] from 1979 to 1983 in Greater Toronto and Greater Montreal.

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[5] The 1980 data, available to August only, are not used because they are not comparable to the full year data for 1973 to 1979.

[6] The Gulf realizations data had to be adjusted by adding the federal sales tax. For 1973 to March 1, 1977, the tax was calculated as 1.107 times the Gulf realizations figure. From March 2, 1977 to April 21, 1980, the tax was at a flat rate of 1.1 cents per litre. On April 22, 1980 it became an *ad valorem* of 9 per cent on the refiner's sales price.

[7] Comparative realizations data for these two sets of accounts were only reported by Shell, Gulf and Imperial Oil. However, Shell reported no data prior to 1978 for regular unleaded gasoline because its sales prior to that data were nil or negligible. The Imperial Oil data were not used in order to maintain historical continuity. Therefore, the 1973 to 1977 realizations data for regular unleaded gasoline are for Gulf only.

[8] This estimate for delivery costs is based on evidence reported by several refiners and resellers on delivery costs within large urban centers, such as, Toronto and Montreal.

[9] Tables for premium unleaded gasoline are not shown here.

A third category of buyer was added ("grouped") when all refiners were not able to provide the required size breakdown. The sources of the data are listed at the end of Table 1.

The simple average gross margins represent the difference between the mean/average net residential heating oil prices (or for gasoline the self-serve pump prices net of all taxes, except the federal sales tax) and the simple average sales realizations or wholesale prices paid by each of the reseller categories for heating oil (or, for each of the grades of gasoline). The nominal gross margins were converted into constant 1981 cents per litre using the monthly consumer price indices for Toronto and Montreal.

The sales volume data provided by all companies was used to derive gross margins based on weighted average realizations for the three categories of resellers. These provide a more representative industry figure given the uneven distribution of reseller sales observed among petroleum companies.

(a) Description of Data

(i) *Respecting home heating or furnace oil*, residential prices (net of any discounts or allowances) were reported by Imperial Oil, Shell, Gulf, Texaco and Petro-Canada[10] (the latter for 1981 and 1983 only). However, sales realization data, and corresponding volume data, on each of the largest two resellers in both metropolitan areas were only provided by Texaco for 1979 to 1983 and by Petro-Canada for 1981 to 1983. Gulf also provided these data for Montreal, but the data in Toronto were for the largest reseller only. For each of the smallest two resellers, complete information was available from Gulf (for Montreal only), and Petro-Canada (for Toronto in 1982 and 1983 and for Montreal in 1981 to 1983). Texaco provided data on its smallest reseller only. Imperial Oil and Shell reported data on average or grouped reseller realizations and volume covering sales to all their resellers (that is, for resellers as a group).[11]

The definitions of the market area which the above data covered also varied by company. Imperial Oil provided information on total transactions with resellers in both Ontario and Quebec. Estimated transportation costs were subtracted from this realization data to net the numbers back to the supplying refinery.[12] (Large spot sales were also excluded from these data.[13]) According to Imperial Oil, the large reseller accounts it supplied only picked up a portion of their total provincial liftings in Toronto and Montreal, respectively (with considerable variations from month to month).

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[10] Suncor did not provide price or sales realizations data for heating oil. See Table 1 for the heating oil sample composition by category of reseller per city for each of the years 1979 to 1983.

[11] Single reseller data reported by Gulf for the largest two reseller category were also included under the grouped reseller category in metropolitan Toronto because it represented the totality of Gulf's reseller sales in that city for 1979 to 1983.

Shell indicated that its reseller base was too small to allow for any meaningful breakdown of its realization data into categories of resellers. Its market areas were Toronto/Oakville and Montreal. Gulf, Texaco and Petro-Canada reported data for Greater Toronto and Greater Montreal.

The range of monthly realizations data or wholesale prices were very close to the range of wholesale prices published for Toronto and Montreal by *Oil Buyers' Guide* as well as the occasional wholesale prices reported by several resellers during the hearings.

Some refiners argued in their response that a straight monthly comparison of net residential prices and sales realization or wholesale rack prices may provide misleading gross margin estimates because resellers generally hold on to their heating oil for several months[14] before selling it at retail. Accordingly, several refiners suggested that it might be more appropriate to compare lagged sales realization data with current monthly residential prices. This suggestion was not acted upon because an examination of monthly volume purchases by the independent resellers generally showed that heating oil liftings from the refiners were mostly during the fall and winter. That is, the amount of heating oil purchased in the off-season months of May to August was not significant enough to warrant such a lagged price analysis.

The smallest resellers' annual volume of purchases from refiners was generally below 2.1 million litres which is less than one half of the required minimum efficient volume for a heating oil distributor with a single tanker truck (see Table 2). Such low-volume sales figures may represent a situation where the purchaser is buying from more than one supplier (either another reseller or another refinery). The small average volume size of resellers in Quebec in particular, but in Ontario as well, however, allows for the possibility that the resellers were buying from a single supplier.

(ii) *Respecting gasoline*, the Commission decided, after the petroleum companies reported that it would not be feasible to provide retail price data on their second-brand networks in Toronto/Montreal, to request monthly pump prices at company controlled self-serve outlets. The prices were requested for regular leaded, regular unleaded and premium unleaded. (The retail pump prices reported by most companies had to be adjusted to remove provincial taxes and/or federal excise taxes to make them comparable to the sales realizations data[15] also requested on gasoline sales to resellers).

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[12] These were Sarnia and Montreal.

[13] Overlapping annual data for 1979/1980 from other Imperial data indicated that this exclusion lowered Imperial Oil's average realization figures by 0.4 cents per litre.

[14] That is, they would fill up their storage tanks in summer (or early fall) for sales commencing in the fall (or over the winter).

Imperial Oil was only able to provide prevalent pump prices for regular leaded gasoline for Toronto/Montreal. Its prevalent prices were defined to be the most commonly occurring prices at its Esso self-serve outlets on a specific day per month. Shell reported price data for the larger markets of Southern Ontario and the St. Lawrence River Valley of Quebec because of (a) the need to match the pump price data with realizations data which were only available (net of price support) for the larger market and (b) the observation that while resellers might pick up at Toronto or Montreal they also delivered to points outside those cities and as a result average pump prices over these wider areas would be more representative of competitive pump price levels. Although the Shell price data covered both its full-service and self-serve company-operated outlets, the use of these data was necessary for statistical reasons because of the limited number of companies reporting price data for unleaded grades of gasoline.[16] This inclusion of full-service outlets creates some upward bias to the measured gross margins of independents relative to self-serve outlets.

Gulf provided the average monthly prices at 17 and 23 of its company-operated (Servico) self-serve outlets in Toronto and Montreal, respectively. These individual outlet prices were averaged by Commission staff to obtain mean prices for Toronto and Montreal. Petro-Canada provided the average monthly sales price at its company-operated outlets (i.e., 10 and 10 car wash facilities with self-serve pumps in Toronto and Montreal, respectively), but only for 1981 to 1983. No pump price data were available from Texaco and Suncor.

Availability of information on gasoline sales realizations and volume of sales, by category of reseller, varied considerably by company.[17] Data on the largest two resellers were reported by Gulf (for Toronto, the data were only for one large reseller from 1981 to 1983), Texaco (for 1979 to May 1980 in Toronto and for 1983 in Montreal, the data were for only one large reseller) and Petro-Canada for 1981 to 1983 (for Montreal, the data were reported for one reseller from 1979 to May 1981, inclusive and then for two resellers for the remainder of the period). For the smallest two resellers, data were provided by Gulf (for 1979 to 1983 in Montreal and for 1979 to 1980 in Toronto), Texaco (on the smallest reseller only) and Petro-Canada for 1982 to 1983 (in Toronto only).

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[15] This was requested net of any price supports available to resellers and on a federal sales tax inclusive basis only in order to standardize the data received from all companies and to allow comparisons between cities in Ontario and Quebec.

[16] While Statistics Canada monthly self-serve pump prices were available they were found to be less comparable to this sample's average prices for the 1982 to 1983 price war period.

[17] The following sample descriptions pertain to the availability of regular leaded gasoline data. For the two other gasoline grades, similar sample characteristics were observed. See Table 1 for the sample composition for each grade of gasoline.

Imperial Oil, Shell and Suncor only provided average realizations data on their sales to resellers as a group.[18] Imperial Oil's data excluded large spot sales. Overlapping annual data for 1979/1980 from other Imperial data indicated that this exclusion lowered Imperial's realization figures by 1.1 to 0.44 cents per litre. The Imperial Oil and Suncor data had to be adjusted by adding the federal sales tax[19] in order to make their figures comparable to other company data.

Gulf in its response to the Commission (exhibit M-728) had stated that its monthly sales realizations for gasoline included federal tax. These data were therefore combined as reported with other company figures to generate the average realizations data used to calculate the gross margins shown in Tables L-11 to L-18. It was later discovered that these realizations figures matched wholesale prices reported elsewhere by Gulf (see item 5 of exhibit M-615) for 1982 and 1983 which were identified as being on a tax exclusive basis. The Commission was subsequently informed by Gulf that the notation in exhibit M-728 was incorrect and that the monthly realizations data reported therein were on a tax exclusive basis for 1979 to 1983 (see exhibit M-806). However, the addition of federal sales tax to these monthly realizations for 1979 to mid-1981 produced figures which greatly exceeded those reported by other refiners. Moreover the annual average of the monthly gross margins calculated with unadjusted Gulf data was found to be comparable to that shown on the annual gross margin table. Therefore, while the use of the unadjusted Gulf data has produced wide variations in monthly margins it does not appear to have greatly affected the annual average calculated from these monthly margins.

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[18] Single reseller data reported by Gulf and Petro Canada for the largest two reseller category were also included under the grouped reseller category in Toronto and Montreal, respectively, when these companies indicated that these data represented the totality of their reseller sales for a particular month or year.

[19] From 1979 to April 21, 1980 the federal sales tax was set on a per unit basis, while from April 22, 1980 onwards it was a nine per cent ad valorem tax on the manufacturer's sales price. The per unit tax data per grade of gasoline were obtained from Energy, Mines and Resources Canada.

The small volumes (see Table 2) purchased by the smallest category of gasoline resellers possibly indicate that these sales concerned small spot transactions or even purchases by individual retail outlets rather than the volume of purchases expected from resellers performing a wholesale and retail function.

TABLE K-1

Sample Composition for Sales Realizations Data Averages

(a) HOME HEATING OIL		
(1) Greater Toronto/Ontario		
— Largest Two:	1979 to 1980:	Gulf (1), Texaco (2)
	1981 to 1983:	Gulf (1), Texaco (2), Petro-Canada (2)
— Smallest Two:	1979 to 1981:	Texaco (1)
	1982 to 1983:	Texaco (1), Petro-Canada (2)
— Grouped Resellers:	1979 to 1983:	Imperial, Shell, Gulf (1)
(2) Greater Montreal/Quebec		
— Largest Two:	1979 to 1980:	Gulf (2), Texaco (2)
	1981 to 1983:	Gulf (2), Texaco (2), Petro-Canada (2)
— Smallest Two:	1979 to 1980:	Gulf (2), Texaco (1)
	1981 to 1983:	Gulf (2), Texaco (1), Petro-Canada (2)
— Grouped Resellers:	1979 to 1983:	Imperial, Shell
(b) REGULAR LEADED GASOLINE		
(1) Greater Toronto/Ontario		
— Largest Two:	1979:	Gulf (2), Texaco (1)
	1980:	Gulf (2), Texaco (2)
	1981 to 1983:	Gulf (1), Texaco (2), Petro-Canada (2)
— Smallest Two:	1979 to 1980:	Gulf (2), Texaco (1)
	1981:	Texaco (1)
	1982 to 1983:	Petro-Canada (2), Texaco (1)
— Grouped Resellers:	1979 to 1980:	Imperial, Shell, Suncor
	1981 to 1983:	Imperial, Shell, Suncor, Gulf (1)

TABLE K-1 (cont'd)

(2) Greater Montreal/Quebec		
— Largest Two:	1979 to 1980:	Gulf (2), Texaco (2)
	1981 to 1982:	Gulf (2), Texaco (2), Petro-Canada (2)
	1983:	Gulf (2), Texaco (1), Petro-Canada (2)
— Smallest Two:	1979 to 1983:	Gulf (2), Texaco (1)
— Grouped Resellers:	1979 to 1980:	Imperial, Shell, Suncor
	1981 to 1983:	Imperial, Shell, Suncor,
(c) REGULAR UNLEADED GASOLINE		
(1) Greater Toronto/Ontario		
— Largest Two:	1979:	Gulf (2), Texaco (1)
	1980:	Gulf (2), Texaco (2)
	1981 to 1983:	Gulf (1), Texaco (2), Petro-Canada (2)
— Smallest Two:	1979 to 1980:	Gulf (2)
	1981:	Texaco (1)
	1982 to 1983:	Petro-Canada (2)
— Grouped Resellers:	1979:	Imperial, Shell, Suncor, Texaco (1)
	1980:	Imperial, Shell, Suncor, Texaco (1), Gulf (1)
	1981:	Imperial, Shell, Suncor, Gulf (1)
	1982 to 1983:	Imperial, Shell, Suncor, Texaco (1), Gulf (1)
(2) Greater Montreal/Quebec		
— Largest Two:	1979 to 1980:	Gulf (2), Texaco (2)
	1981 to 1982:	Gulf (2), Texaco (2), Petro-Canada (2)
	1983:	Gulf (2), Texaco (1), Petro-Canada (2)
— Smallest Two:	1979 to 1983:	Gulf (2), Texaco (1)
— Grouped Resellers:	1979 to 1980:	Imperial, Shell, Suncor
	1981 to 1983:	Imperial, Shell, Suncor
(d) PREMIUM UNLEADED GASOLINE		
(1) Greater Toronto/Ontario		
— Largest Two:	1979:	Gulf (2), Texaco (1)
	1980:	Gulf (2), Texaco (2)
	1981 to 1983:	Gulf (1), Texaco (2), Petro-Canada (2)
— Smallest Two:	1979 to 1980:	Gulf (2)
	1981:	n.a.
	1982 to 1983:	Petro-Canada (2)
— Grouped Resellers:	1979 to 1980:	Imperial, Shell, Suncor, Texaco (1), Gulf (1)
	1981 to 1982:	Imperial, Shell, Suncor, Gulf (1)

TABLE K-1 (cont'd)

	1983:	Imperial, Shell, Suncor, Texaco (1), Gulf (1)
(2) Greater Montreal/Quebec		
— Largest Two:	1979 to 1980:	Gulf (2), Texaco (2)
	1981 to 1982:	Gulf (2), Texaco (2), Petro-Canada (2)
	1983:	Gulf (2), Texaco (1), Petro-Canada (2)
— Smallest Two:	1979 to 1983:	Gulf (2), Texaco (1)
— Grouped Resellers:	1979 to 1980:	Imperial, Shell, Suncor
	1981 to 1983:	Imperial, Shell, Suncor

Notes:

1. The figures in parentheses indicate whether the company concerned reported data for its (2) largest or smallest resellers or for only (1) large or small reseller.
2. Volume data were generally available for the samples described above, except for the summer months for heating oil when no sales volumes were often observed.

Sources:

(a) Imperial Oil — Exhibit M-734 and Exhibit M-735 Confidential.

(b) Shell — Exhibits M-738 Confidential and M-759 Confidential.

(c) Gulf — Exhibits M-724 for 1979 to 1981, M-728 Confidential for 1982 to 1983 and M-806.

(d) Texaco — Exhibits M-726 for 1979 to 1980, M-730 Confidential for 1981 to 1983 and M-771 Confidential for 1979 to 1983.

(e) Petro-Canada — Exhibit M-742 Confidential

(f) Suncor — Exhibits M-672, item 12 for 1979 to 1981 and M-673 Confidential for 1982 to 1983.

TABLE K-2

Volumes of Heating Oil and Motor Gasoline Purchased By Each of The Smallest Two Resellers (000's of litres)

A. HEATING OIL

	Gulf		Texaco	Petro-Canada	
	(1)	(2)	(1)	(1)	(2)
			A. Montreal		
1979	154	423	2,480	n.a.	n.a.
1980	171	490	2,056	n.a.	n.a.
1981	160	338	1,532	1,808	580
1982	115	211	1,267	1,984	375
1983	248	415	1,362	2,002	516
			B. Toronto		
1979	—	—	2,044	n.a.	n.a.
1980	—	—	2,007	n.a.	n.a.
1981	—	—	1,776	n.a.	n.a.
1982	—	—	1,553	1,959	1,299
1983	—	—	1,470	1,069	1,110

B. MOTOR GASOLINE

	Gulf		Texaco	Petro-Canada	
	(1)	(2)	(1)	(1)	(2)
			A. Montreal		
1979	592	1,475	1,125	n.a.	n.a.
1980	528	1,171	1,454	n.a.	n.a.
1981	397	705	1,114	n.a.	n.a.
1982	1,045	750	848	—	—
1983	606	937	51	—	—
			B. Toronto		
1979	6,266	8,667	274	n.a.	n.a.
1980	5,341	2,902	240	n.a.	n.a.
1981	—	—	250	n.a.	n.a.
1982	—	—	184	3,050	2,279
1983	—	—	97	777	594

Source: See the sources listed for Gulf, Texaco and Petro-Canada in Table 1.

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Tabular Data Related to Analysis of Gross Margins

TABLE L-1

Annual Gross Margins Available to Independent Resellers of Heating Oil, 1973 to 1982, In Nominal and Constant 1981 Cents Per Litre

	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
A. Gross Margin Derived by Deducting from the Average Annual Residential Price (b), the Simple Average of Sales Realizations as Reported by:										
1. Shell(c) and Gulf(d) for Ontario	1.94	2.47	2.16	2.82	3.09	3.23	2.75	2.60	4.45	6.00
2. Shell and Gulf for Quebec/Atlantic Canada	2.05	2.00	2.32	3.04	2.99	3.46	2.54	2.88	4.80	7.46
B. Gross Margin(a) in Constant 1981 Cents Derived by Deducting from the Average Annual Residential Price (b), the Simple Average of Sales Realizations as Reported by:										
1. Shell and Gulf for Ontario	4.03	4.64	3.67	4.46	4.54	4.37	3.41	2.93	4.45	5.39
2. Shell and Gulf for Quebec/Atlantic Canada	4.29	3.76	3.93	4.83	4.38	4.68	3.15	3.24	4.80	6.69

Notes and Sources:

(a) The gross margin figures in Part A were adjusted to remove the effect of inflation. For Ontario and the Quebec/Atlantic Canada region, the Toronto and Montreal CPI indices were used.

(b) The average annual residential prices used in the above calculations are for Toronto and Montreal. These were obtained from the Prices Division of Statistics Canada.

(c) For Shell, the data are from Exhibit M-664, Tab 25714 for 1973 to 1980 and Exhibit M-664A Confidential, Tab 25714 for 1981 to 1982.

(d) For Gulf, the data are from Exhibits M-614 and M-615 Confidential for 1973 to 1980, and 1981 to 1982, respectively.

TABLE L-2

Annual Realizations by Refiners on Sales of Heating Oil to Commercial/Industrial (CI) Accounts and to Independent Resellers (PBD), 1973 to 1982, In Nominal and Constant 1981 Cents Per Litre

	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
A. The Simple Average of CI/PBD Sales Realizations as Reported by:										
1. Shell(c) and Gulf(d) for Ontario	3.98 3.76	5.81 4.73	7.24 5.98	7.90 6.78	8.68 7.91	9.99 9.37	11.82 11.28	15.36 14.25	21.30 19.85	24.94 23.70
2. Shell and Gulf for Quebec/Atlantic Canada	4.64 3.85	6.64 5.70	7.99 6.18	8.68 6.76	9.69 8.11	10.84 9.14	12.80 11.86	16.87 14.42	23.50 20.10	26.78 22.98
B. The Simple Average of CI/PBD Sales Realizations(a) in Constant 1981 Cents as Reported by:										
1. Shell and Gulf for Ontario	8.27 7.82	10.92 8.89	12.29 10.15	12.50 10.73	12.75 11.62	13.52 12.68	14.65 13.98	17.28 16.03	21.30 19.85	22.41 21.29
2. Shell and Gulf for Quebec/Atlantic Canada	9.71 8.05	12.48 10.71	13.54 10.48	13.78 10.73	14.21 11.89	14.67 12.37	15.88 14.72	18.96 16.20	23.50 20.10	24.00 20.59
C. The Simple Average of CI Sales Realizations (Minus Delivery Costs)(b) and PBD Sales Realizations in Constant 1981 Cents as Reported by:										
1. Shell and Gulf for Ontario	7.17 7.82	9.82 8.89	11.19 10.15	11.40 10.73	11.65 11.62	12.42 12.68	13.55 13.98	16.18 16.03	20.20 19.85	21.31 21.29
2. Shell and Gulf for Quebec/Atlantic Canada	8.61 8.05	11.38 10.71	12.44 10.48	12.68 10.73	13.11 11.89	13.57 12.37	14.78 14.72	17.86 16.20	22.40 20.10	22.90 20.59

Notes and Sources:

(a) The average annual realizations in Part A were adjusted to remove the effect of inflation. For Ontario and the Quebec/Atlantic Canada region, the Toronto and Montreal CPI indices were used.

(b) The inflation adjusted average annual realizations for commercial/industrial accounts in Part B were further adjusted by deducting 1.1 in constant 1981 cents per litre for delivery costs based on the estimate of 0.88 cents per litre for 1979 in the June 1979 Department of Energy, Mines and Resources Canada task force study at Table IV, note 2 of Exhibit C-198B.

(c) For Shell, the data are from Exhibit M-664, Tab 25714 for 1973 to 1980 and Exhibit M-664A Confidential, Tab 25714 for 1981 to 1982.

(d) For Gulf, the data are from Exhibits M-614 and M-615 Confidential for 1973 to 1980 and 1981 to 1982, respectively.

TABLE L-3

Selected Annual Gross Margins Available to Independent Resellers of Regular Leaded Gasoline, 1973 to 1982, In Cents Per Litre

	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Gross Margin Derived by Deducting the Simple Average of Sales Realizations to Independent Resellers Reported by (i) Shell and Gulf(c) and (ii) Shell, Gulf and Suncor(c) From Selected Annual Retail Pump Prices(d)										
A. TORONTO PRICES — ONTARIO SALES REALIZATIONS										
1. Statistics Canada — Full-Service(a)										
a) Shell and Gulf	3.71	3.63	3.34	3.55	3.60	3.87	4.13	4.70	6.59	7.29
b) Shell, Gulf and Suncor	n.a.	3.36	3.21	3.40	3.57	3.77	4.09	4.47	6.54	7.48
2. Statistics Canada — Self-Serve(a)										
a) Shell and Gulf	n.a.	n.a.	n.a.	2.41	2.37	2.94	3.23	3.05	4.49	4.99
b) Shell, Gulf and Suncor	n.a.	n.a.	n.a.	2.31	2.34	2.87	3.19	2.87	4.44	5.18
3. Kent/EMR—National Major Refiner Self-Serve(b)										
a) Shell and Gulf	2.29	2.27	1.83	2.13	2.26	3.07	3.46	n.a.	n.a.	n.a.
b) Shell, Gulf and Suncor	n.a.	1.98	1.70	2.03	2.23	3.00	3.42	n.a.	n.a.	n.a.
4. Kent/EMR—National Major Refiner Second Brand Full-Service(b)										
a) Shell and Gulf	1.65	1.99	1.54	1.67	1.64	2.49	2.73	n.a.	n.a.	n.a.
b) Shell, Gulf and Suncor	n.a.	1.70	1.41	1.57	1.61	2.39	2.69	n.a.	n.a.	n.a.
5. Kent/EMR — Ind. Reseller Full-Service(b)										
a) Shell and Gulf	1.90	2.20	1.54	1.91	2.02	2.65	2.86	n.a.	n.a.	n.a.
b) Shell, Gulf and Suncor	n.a.	1.91	1.41	1.81	1.99	2.58	2.82	n.a.	n.a.	n.a.
B. MONTREAL PRICES — QUEBEC/ATLANTIC CANADA SALES REALIZATIONS										
1. Statistics Canada — Full-Service(a)										
a) Shell and Gulf	2.90	2.77	2.52	3.00	3.03	3.27	3.64	4.29	5.75	6.29
b) Shell, Gulf and Suncor	n.a.	2.96	2.53	2.82	2.97	3.42	3.51	3.87	5.57	6.04
2. Statistics Canada — Self-Serve(a)										
a) Shell and Gulf	n.a.	n.a.	n.a.	2.54	2.61	2.91	3.24	3.65	4.85	5.69
b) Shell, Gulf and Suncor	n.a.	n.a.	n.a.	2.41	2.55	3.06	3.11	3.27	4.67	5.44
3. Kent/EMR—National Major Refiner Self-Serve(b)										
a) Shell and Gulf	1.95	2.04	1.70	2.31	2.59	2.74	3.00	n.a.	n.a.	n.a.
b) Shell, Gulf and Suncor	n.a.	2.16	1.74	2.18	2.53	2.89	2.87	n.a.	n.a.	n.a.
4. Kent/EMR—National Major Refiner Second Brand Full-Service(b)										
a) Shell and Gulf	1.59	1.78	1.38	2.05	2.31	2.24	2.45	n.a.	n.a.	n.a.
b) Shell, Gulf and Suncor	n.a.	1.90	1.42	1.92	2.25	2.39	2.32	n.a.	n.a.	n.a.

TABLE L-3 (cont'd)

	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
5. Kent/EMR—Ind. Reseller Full-Service(b)										
a) Shell and Gulf	1.97	2.11	1.62	2.35	2.68	2.49	2.53	n.a.	n.a.	n.a.
b) Shell, Gulf and Suncor	n.a.	2.23	1.66	2.22	2.62	2.64	2.40	n.a.	n.a.	n.a.

Notes and Sources:

(a) The Statistics Canada (Prices Division) annual full-service and self-serve retail pump prices used in the above gross margin calculations are for the metropolitan areas of Toronto and Montreal. The annual price is a weighted average of monthly prices.

(b) The Kent/EMR annual price data were based on surveys of retail pump prices of individual gasoline marketing outlets in Metro Montreal and Toronto which were carried out by Kent Marketing Services Limited at a rate of two to six times per year. The individual outlet data per survey date were provided to the Director of Investigation and Research by Energy, Mines and Resources Canada in the form of a weighted (by volume) average for various categories of marketing outlet, including the three used in this table. See Green Book, Volume VI, pp. 461 to 462 and 467 to 477. The annual prices used for the above calculations are simple averages of the two to six survey prices available per year.

(c) The annual average sales realizations data were reported by Shell and Gulf for 1973 to 1982 and Suncor for 1974 to 1982. For Shell, see Exhibits M-664, Tab 25714 for 1973 to 1980 and M-664A, Confidential, Tab 25714 for 1981 to 1982. For Gulf, see Exhibits M-614 for 1973 to 1980 and M-615 Confidential for 1981 to 1982. For Suncor, see Exhibits M-672, item 12 for 1973 to 1981 and M-673 Confidential for 1982.

(d) The price and realizations data were adjusted to include only federal sales tax in order to allow comparisons between provinces/regions.

TABLE L-4

Selected Annual Gross Margins Available to Independent Resellers of Regular Leaded Gasoline, 1973 to 1982, In Constant 1981 Cents Per Litre(a)

	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Gross Margin Derived by Deducting the Simple Average of Sales Realizations to Independent Resellers Reported by (i) Shell and Gulf(d) and (ii) Shell, Gulf and Suncor(d) From Selected Annual Retail Pump Prices(e)										
A. TORONTO PRICES — ONTARIO SALES REALIZATIONS										
1. Statistics Canada — Full-Service(b)										
a) Shell and Gulf	7.71	6.82	5.67	5.62	5.29	5.24	5.12	5.29	6.59	6.55
b) Shell, Gulf and Suncor	n.a.	6.32	5.45	5.38	5.24	5.11	5.07	5.03	6.54	6.72
2. Statistics Canada — Self-Serve(b)										
a) Shell and Gulf	n.a.	n.a.	n.a.	3.81	3.48	3.98	4.00	3.43	4.49	4.48
b) Shell, Gulf and Suncor	n.a.	n.a.	n.a.	3.66	3.44	3.89	3.95	3.23	4.44	4.65
3. Kent/EMR —National Major Refiner Self-Serve(c)										
a) Shell and Gulf	4.76	4.27	3.11	3.37	3.32	4.15	4.29	n.a.	n.a.	n.a.
b) Shell, Gulf and Suncor	n.a.	3.73	2.89	3.21	3.28	4.05	4.24	n.a.	n.a.	n.a.
4. Kent/EMR —National Major Refiner Second Brand Full-Service(c)										
a) Shell and Gulf	3.43	3.74	2.62	2.64	2.41	3.37	3.38	n.a.	n.a.	n.a.
b) Shell, Gulf and Suncor	n.a.	3.20	2.39	2.48	2.36	3.23	3.33	n.a.	n.a.	n.a.
5. Kent/EMR — Ind. Reseller Full-Service(c)										
a) Shell and Gulf	3.95	4.14	2.62	3.02	2.97	3.58	3.54	n.a.	n.a.	n.a.
b) Shell, Gulf and Suncor	n.a.	3.59	2.39	2.86	2.92	3.49	3.49	n.a.	n.a.	n.a.
B. MONTREAL PRICES — QUEBEC/ATLANTIC CANADA SALES REALIZATIONS										
1. Statistics Canada — Full-Service(b)										
a) Shell and Gulf	6.07	5.21	4.27	4.76	4.44	4.43	4.52	4.82	5.75	5.64
b) Shell, Gulf and Suncor	n.a.	5.56	4.29	4.48	4.36	4.63	4.36	4.35	5.57	5.41
2. Statistics Canada — Self-Serve(b)										
a) Shell and Gulf	n.a.	n.a.	n.a.	4.03	3.83	3.94	4.02	4.10	4.85	5.10
b) Shell, Gulf and Suncor	n.a.	n.a.	n.a.	3.83	3.74	4.15	3.86	3.67	4.67	4.88
3. Kent/EMR —National Major Refiner Self-Serve(c)										
a) Shell and Gulf	4.07	3.84	2.88	3.67	3.80	3.71	3.72	n.a.	n.a.	n.a.
b) Shell, Gulf and Suncor	n.a.	4.07	2.95	3.46	3.71	3.91	3.56	n.a.	n.a.	n.a.

TABLE L-5 (cont'd)

	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
4. Kent/EMR —National Major Refiner Second Brand Full-Service(c)										
a) Shell and Gulf	3.33	3.34	2.34	3.25	3.39	3.03	3.04	n.a.	n.a.	n.a.
b) Shell, Gulf and Suncor	n.a.	3.57	2.41	3.05	3.30	3.23	2.88	n.a.	n.a.	n.a.
5. Kent/EMR — Ind. Reseller Full-Service(c)										
a) Shell and Gulf	4.12	3.97	2.75	3.73	3.93	3.36	3.14	n.a.	n.a.	n.a.
b) Shell, Gulf and Suncor	n.a.	4.19	2.81	3.52	3.84	3.57	2.98	n.a.	n.a.	n.a.

Notes and Sources:

(a) The gross margin figures in Table 3 were adjusted to remove the effect of inflation. For Ontario and the Quebec/Atlantic Canada region, the Toronto and Montreal CPI indices were used.

(b) The Statistics Canada (Prices Division) annual full-service and self-serve retail pump prices used in the above gross margin calculations are for the metropolitan areas of Toronto and Montreal. The annual price is a weighted average of monthly prices.

(c) The Kent/EMR annual price data were based on surveys of retail pump prices of individual gasoline marketing outlets in Metro Montreal and Toronto which were carried out by Kent Marketing Services Limited at a rate of two to six times per year. The individual outlet data per survey date were provided to the Director of Investigation and Research by Energy, Mines and Resources Canada in the form of a weighted (by volume) average for various categories of marketing outlet, including the three used in this table. See Green Book, Volume VI, pp. 461 to 462 and 467 to 477. The annual prices used for the above calculations are simple averages of the two to six survey prices available per year.

(d) The annual average sales realizations data were reported by Shell and Gulf for 1973 to 1982 and Suncor for 1974 to 1982. For Shell, see Exhibits M-664, Tab 25714 for 1973 to 1980 and M-664A, Confidential, Tab 25714 for 1981 to 1982. For Gulf, see Exhibits M-614 for 1973 to 1980 and M-615 Confidential for 1981 to 1982. For Suncor, see Exhibits M-672, item 12 for 1973 to 1981 and M-673 Confidential for 1982.

(e) The price and realizations data were adjusted to include only federal sales tax in order to standardize the data received from all companies and to allow comparisons between provinces/regions.

TABLE L-5

Annual Realizations by Refiners on Sales of Regular Leaded Gasoline to Commercial/Industrial (CI) Accounts and to Independent Resellers (PBD), 1973 to 1982, In Nominal and Constant 1981 Cents Per Litre

	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
A. The Simple Average of CI/PBD Sales Realizations as Reported by:										
1. Shell(c) and Gulf(d) for Ontario	4.51	6.95	8.32	9.27	10.48	11.79	13.45	17.66	25.15	29.00
	4.43	6.45	7.57	8.24	9.73	10.56	12.68	16.20	22.85	27.41
2. Shell and Gulf for Quebec/Atlantic Canada	4.84	7.62	8.87	9.60	11.06	12.14	13.84	18.24	26.20	30.39
	4.54	7.12	7.78	8.11	9.53	10.56	13.06	16.41	22.98	27.75
3. Shell and Gulf for B.C. and the Prairies	5.12	6.98	8.68	9.99	11.38	12.70	14.20	17.89	25.98	30.28
	4.25	6.34	7.41	8.30	9.89	11.14	12.52	15.15	23.19	27.51
B. The Simple Average of CI/PBD Sales Realizations in Constant 1981 Cents(a) as Reported by:										
1. Shell and Gulf for Ontario	9.38	13.06	14.13	14.67	15.39	15.95	16.67	19.87	25.15	26.06
	9.21	12.12	12.85	13.04	14.29	14.29	15.71	18.22	22.85	24.63
2. Shell and Gulf for Quebec/Atlantic Canada	10.13	14.32	15.03	15.24	16.22	16.43	17.17	20.49	26.20	27.23
	9.50	13.38	13.19	12.87	13.97	14.29	16.20	18.44	22.98	24.87
3. Shell and Gulf for B.C. and the Prairies	10.81	13.35	14.91	15.76	16.56	17.05	17.58	20.15	25.98	27.13
	8.97	12.12	12.73	13.09	14.40	14.96	15.50	17.06	23.19	24.65
C. The Simple Average of CI Realizations (Minus Delivery Costs) and PBD Sales Realizations in Constant 1981 Cents(b) as Reported by:										
1. Shell and Gulf for Ontario	8.98	12.66	13.73	14.27	14.99	15.55	16.27	19.47	24.75	25.66
	9.21	12.12	12.85	13.04	14.29	14.29	15.71	18.22	22.85	24.63
2. Shell and Gulf for Quebec/Atlantic Canada	9.73	13.92	14.63	14.84	15.82	16.03	16.77	20.09	25.80	26.83
	9.50	13.38	13.19	12.87	13.97	14.29	16.20	18.44	22.98	24.87
3. Shell and Gulf for B.C. and the Prairies	10.41	12.95	14.51	15.36	16.16	16.65	17.18	19.75	25.58	26.73
	8.97	12.12	12.73	13.09	14.40	14.96	15.50	17.06	23.19	24.65

Notes and Sources:

(a) The annual realizations in Part A were adjusted to remove the effect of inflation. For Ontario and the Quebec/Atlantic Canada region, the Toronto and Montreal CPI indices were used. For B.C. and the Prairies, an average of the CPI indices for Vancouver, Calgary, Regina and Winnipeg was used.

(b) The inflation adjusted average annual realizations for commercial/industrial accounts in Part B were further adjusted by deducting 0.4¢ per litre for delivery costs based on estimates reported by refiners and resellers.

(c) For Shell, the data are from Exhibit M-664, Tab 25714 for 1973 to 1980 and Exhibit M-664A Confidential, Tab 25714 for 1981 to 1982.

(d) For Gulf, the data are from Exhibit M-614 and Exhibit M-615 Confidential for 1973 to 1980 and 1981 to 1982, respectively.

TABLE L-6

Annual Realizations by Refiners on Sales of Regular Unleaded Gasoline to Commercial/Industrial (CI) Accounts and to Independent Resellers (PBD), 1973 to 1982ª, In Nominal and Constant 1981 Cents Per Litre

	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
A. The Simple Average of CI/PBD Sales Realizations as Reported by:										
1. Shell(d) and Gulf(e) for Ontario	7.15 5.50	9.01 7.30	9.14 7.34	10.13 8.88	11.27 10.20	11.93 11.33	13.69 13.64	18.52 17.65	26.00 24.62	30.04 28.88
2. Shell and Gulf for Quebec/Atlantic Canada	7.56 4.31	9.41 8.24	9.42 8.27	10.21 8.99	11.64 10.16	12.64 11.05	14.91 14.01	19.90 17.80	27.67 24.06	32.01 28.98
3. Shell and Gulf for B.C. and the Prairies	6.58 —	8.41 7.63	9.74 8.28	10.95 9.11	12.50 10.60	13.18 11.79	14.81 13.27	18.68 16.23	27.79 24.83	31.70 28.82
B. The Simple Average of CI/PBD Sales Realizations in Constant 1981 Cents(b) as Reported by:										
1. Shell and Gulf for Ontario	14.87 11.44	16.94 13.72	15.52 12.46	16.03 14.05	16.55 14.98	16.14 15.33	16.96 16.90	20.83 19.85	26.00 24.62	26.99 25.95
2. Shell and Gulf for Quebec/Atlantic Canada	15.82 9.02	17.69 15.49	15.97 14.02	16.21 14.27	17.07 14.90	17.10 14.95	18.50 17.38	22.36 20.00	27.67 24.06	28.68 25.97
3. Shell and Gulf for B.C. and the Prairies	13.89 —	16.08 14.59	16.73 14.22	17.27 14.37	18.20 15.43	17.70 15.83	18.33 16.43	21.04 18.28	27.79 24.83	28.41 25.82
C. The Simple Average of CI Realizations (Minus Delivery Costs) and PBD Sales Realizations in Constant 1981 Cents(c) as Reported by:										
1. Shell and Gulf for Ontario	14.47 11.44	16.54 13.72	15.12 12.46	15.63 14.05	16.15 14.98	15.74 15.33	16.56 16.90	20.43 19.85	25.60 24.62	26.59 25.95
2. Shell and Gulf for Quebec/Atlantic Canada	15.42 9.02	17.29 15.49	15.57 14.02	15.81 14.27	16.67 14.90	16.70 14.95	18.40 17.38	21.96 20.00	27.27 24.06	28.28 25.97
3. Shell and Gulf for B.C. and the Prairies	13.49 —	15.68 14.59	16.33 14.22	16.87 14.37	17.80 15.43	17.30 15.83	17.93 16.43	20.64 18.28	27.39 24.83	28.01 25.82

Notes and Sources:

(a) The figures for 1973 to 1977 are for Gulf only. Shell reported that its sales prior to 1978 were nil or negligible.

(b) The average annual realizations in Part A were adjusted to remove the effect of inflation. For Ontario and the Quebec/Atlantic Canada region, the Toronto and Montreal CPI indices were used. For B.C. and the Prairies, an average of the CPI indices for Vancouver, Calgary, Regina and Winnipeg was used.

(c) The inflation adjusted average realizations for commercial/industrial accounts in Part B were further adjusted by deducting 0.4¢ per litre for delivery costs based on estimates reported by refiners and resellers.

(d) For Shell, the data are from Exhibit M-664, Tab 25714 for 1973 to 1980 and Exhibit M-664A Confidential, Tab 25714 for 1981 to 1982.

(e) For Gulf, the data are from Exhibit M-614 and Exhibit M-615 Confidential for 1973 to 1980 and 1981 to 1982, respectively.

TABLE L-7

Monthly Gross Margins Available to the Largest Two, Smallest Two and Grouped Resellers of Heating Oil, 1979 to 1983, In Cents Per Litre

	Year	January	February	March	April	May	June	July	August	September	October	November	December	Ave.
							(a) Greater Toronto/Ontario							
Largest Two Resellers	1979	3.8	3.5	3.4	3.9	3.3	3.3	3.3	3.2	2.9	3.0	3.0	2.9	3.3
	1980	3.0	3.1	3.1	3.0	3.0	2.9	3.1	2.5	2.8	3.4	3.6	3.6	3.1
	1981	3.5	3.8	3.8	3.5	2.2	3.5	3.8	2.7	4.3	4.9	5.3	5.7	3.9
	1982	5.9	6.0	6.0	6.2	6.3	6.1	5.5	4.6	6.5	7.6	7.7	7.8	6.4
	1983	7.6	7.5	8.1	7.7	7.8	6.3	7.0	7.3	7.5	7.5	8.0	7.9	7.5
Smallest Two Resellers	1979	3.4	3.1	2.9	3.3	2.7	2.7	2.5	2.1	2.6	2.8	2.8	2.7	2.8
	1980	2.9	2.9	2.9	2.9	2.9	2.8	n.a.	n.a.	2.6	2.9	3.1	3.2	2.9
	1981	3.1	3.2	3.3	3.0	2.4	2.8	2.8	2.3	2.2	3.5	3.7	3.9	3.0
	1982	5.1	5.5	6.8	7.0	7.3	7.0	6.2	5.6	7.7	8.1	8.3	8.6	6.9
	1983	7.4	7.4	9.1	9.4	9.3	7.9	8.6	8.6	6.9	7.1	7.2	7.2	8.0
Grouped Resellers	1979	4.0	3.5	3.5	4.1	3.5	3.7	3.5	3.4	2.9	2.6	3.0	2.8	3.4
	1980	3.0	3.0	3.1	3.1	2.8	3.0	3.4	2.8	2.9	3.4	3.0	3.0	3.0
	1981	2.9	2.8	2.9	2.9	3.7	4.2	3.5	2.6	2.6	4.4	4.7	5.1	3.5
	1982	5.1	5.2	5.8	5.9	6.7	6.1	5.4	4.5	7.6	8.4	7.8	7.2	6.3
	1983	6.7	6.7	8.2	7.5	7.4	6.1	8.0	6.1	7.5	8.0	6.7	6.8	7.1
							(b) Greater Montreal/Quebec							
Largest Two Resellers	1979	2.6	3.2	2.6	2.9	2.6	2.8	2.7	2.6	2.3	2.4	2.5	2.4	2.6
	1980	2.9	2.3	2.3	2.4	2.4	2.4	2.8	2.3	2.5	2.9	2.9	3.0	2.6
	1981	2.9	2.9	3.7	3.1	3.3	3.8	3.7	4.4	5.0	5.7	5.7	5.9	4.2
	1982	5.8	6.2	7.6	7.4	7.3	7.4	7.4	7.3	7.5	7.8	7.9	7.3	7.2
	1983	7.2	7.3	8.2	7.0	7.2	6.8	7.0	6.9	6.4	6.4	6.4	6.2	6.9
Smallest Two Resellers	1979	2.6	2.7	2.4	2.5	2.3	2.6	2.6	2.5	2.2	2.2	2.5	2.3	2.5
	1980	1.9	2.0	2.0	2.2	2.3	2.4	2.6	2.3	2.3	3.2	3.0	2.7	2.4
	1981	2.5	2.8	3.2	2.6	2.4	3.3	3.3	4.0	4.0	4.4	4.7	5.3	3.5
	1982	5.9	6.2	7.3	6.8	6.8	6.6	5.7	5.8	7.0	7.1	7.2	6.9	6.6
	1983	6.3	7.0	7.4	5.9	6.5	6.5	6.7	6.3	5.5	5.9	5.7	6.1	6.3
Grouped Resellers	1979	3.4	3.4	2.9	2.9	3.0	2.6	3.0	2.9	2.7	2.2	2.5	2.7	2.9
	1980	2.4	2.5	2.6	2.4	2.4	2.5	2.7	3.2	2.8	2.9	2.6	2.3	2.6
	1981	2.3	2.4	2.6	2.6	3.2	3.2	3.0	3.3	4.3	4.7	4.9	5.9	3.5
	1982	5.5	5.7	6.4	6.4	7.0	7.4	6.2	6.1	6.9	6.9	6.9	6.3	6.5
	1983	6.2	6.0	6.2	5.9	5.9	5.8	7.2	6.0	5.2	5.4	5.4	4.9	5.8

TABLE L-8

Monthly Gross Margins Available to the Largest Two, Smallest Two and Grouped Resellers of Heating Oil, 1979 to 1983, In Constant 1981 Cents Per Litre

	Year	January	February	March	April	May	June	July	August	September	October	November	December	Ave.
							(a) Greater Toronto/Ontario							
Largest Two Resellers	1979	4.9	4.5	4.3	4.9	4.1	4.1	4.1	3.9	3.5	3.6	3.6	3.4	4.1
	1980	3.6	3.6	3.6	3.5	3.4	3.3	3.5	2.8	3.1	3.7	3.9	3.9	3.5
	1981	3.7	4.0	3.9	3.6	2.2	3.5	3.8	2.7	4.2	4.7	5.1	5.5	3.9
	1982	5.6	5.6	5.5	5.7	5.7	5.4	4.9	4.1	5.7	6.7	6.7	6.8	5.7
	1983	6.6	6.5	6.9	6.6	6.7	5.3	5.9	6.1	6.3	6.3	6.7	6.6	6.4
Smallest Two Resellers	1979	4.4	4.0	3.7	4.2	3.4	3.4	3.1	2.6	3.2	3.4	3.3	3.2	3.5
	1980	3.4	3.4	3.4	3.3	3.3	3.2	n.a.	n.a.	2.9	3.2	3.4	3.4	3.3
	1981	3.3	3.4	3.4	3.1	2.4	2.8	2.8	2.3	2.2	3.4	3.6	3.7	3.0
	1982	4.9	5.2	6.3	6.4	6.6	6.2	5.5	5.0	6.8	7.1	7.2	7.5	6.2
	1983	6.4	6.4	7.8	8.1	8.0	6.7	7.2	7.2	5.8	5.9	6.0	6.0	6.8
Grouped Resellers	1979	5.2	4.5	4.4	5.2	4.4	4.6	4.3	4.2	3.5	3.1	3.6	3.3	4.2
	1980	3.6	3.5	3.6	3.6	3.2	3.4	3.8	3.1	3.2	3.7	3.3	3.2	3.4
	1981	3.1	2.9	3.0	3.0	3.8	4.2	3.5	2.6	2.5	4.2	4.5	4.9	3.5
	1982	4.9	4.9	5.4	5.4	6.1	5.4	4.8	4.0	6.7	7.4	6.8	6.2	5.7
	1983	5.8	5.8	7.0	6.5	6.4	5.1	6.7	5.1	6.3	6.7	5.6	5.6	6.1
							(b) Greater Montreal/Quebec							
Largest Two Resellers	1979	3.4	4.1	3.3	3.7	3.3	3.5	3.3	3.2	2.8	2.9	3.0	2.9	3.3
	1980	3.4	2.7	2.7	2.8	2.7	2.7	3.1	2.5	2.7	3.2	3.1	3.2	2.9
	1981	3.1	3.0	3.8	3.2	3.4	3.8	3.7	4.3	4.9	5.5	5.5	5.6	4.2
	1982	5.5	5.8	7.0	6.8	6.6	6.6	6.6	6.4	6.6	6.8	6.8	6.3	6.5
	1983	6.3	6.3	7.1	6.0	6.2	5.8	5.9	5.8	5.4	5.3	5.3	5.2	5.9
Smallest Two Resellers	1979	3.4	3.5	3.1	3.1	2.9	3.3	3.2	3.1	2.7	2.7	3.0	2.7	3.1
	1980	2.2	2.3	2.3	2.5	2.6	2.7	2.9	2.5	2.5	3.5	3.2	2.9	2.7
	1981	2.6	2.9	3.3	2.7	2.4	3.3	3.3	3.9	3.9	4.3	4.5	5.0	3.5
	1982	5.6	5.8	6.7	6.2	6.1	5.9	5.1	5.1	6.1	6.2	6.2	6.0	5.9
	1983	5.5	6.1	6.4	5.1	5.6	5.5	5.7	5.3	4.6	4.9	4.7	5.1	5.4
Grouped Resellers	1979	4.4	4.4	3.7	3.7	3.8	3.6	3.7	3.6	3.3	3.1	3.0	3.2	3.6
	1980	2.8	2.9	3.0	2.8	2.7	2.8	3.0	3.5	3.1	3.2	2.8	2.5	2.9
	1981	2.4	2.5	2.7	2.7	3.2	3.2	3.0	3.3	4.2	4.6	4.7	5.6	3.5
	1982	5.2	5.3	5.9	5.9	6.3	6.6	5.5	5.4	6.1	6.0	6.0	5.5	5.8
	1983	5.4	5.2	5.3	5.1	5.0	4.9	6.1	5.1	4.4	4.5	4.5	4.1	5.0

TABLE L-9

Monthly Gross Margins (Based on Weighted Average Realizations Data) Available to the Largest Two, Smallest Two and Grouped Resellers of Heating Oil, 1979 to 1983, In Cents Per Litre

	Year	January	February	March	April	May	June	July	August	September	October	November	December	Ave.
(a) Greater Toronto/Ontario														
Largest Two Resellers	1979	4.0	3.8	3.6	4.0	3.3	3.2	3.3	3.5	2.9	2.9	3.0	2.9	3.4
	1980	3.0	3.0	3.1	3.0	3.0	2.9	3.0	2.6	2.8	3.5	3.8	3.7	3.1
	1981	3.3	4.2	4.0	3.4	2.2	3.4	3.6	3.1	4.4	4.8	5.4	5.8	4.0
	1982	5.9	6.2	6.1	6.3	6.8	6.8	6.5	6.8	6.6	7.8	8.0	7.7	6.8
	1983	8.0	7.6	7.8	8.7	8.5	7.4	8.0	8.1	8.7	7.2	8.2	8.1	8.0
Smallest Two Resellers	1979	3.4	3.1	2.9	3.3	2.7	2.7	2.5	2.1	2.6	2.8	2.8	2.7	2.8
	1980	2.9	2.9	2.9	2.9	2.9	2.8	n.a.	n.a.	2.6	2.9	3.1	3.2	2.9
	1981	3.1	3.2	3.3	3.0	2.4	2.8	2.8	2.3	2.2	3.5	3.7	3.9	3.0
	1982	5.1	5.6	6.9	7.2	7.5	7.5	4.7	5.5	7.3	7.4	8.2	8.6	6.8
	1983	7.4	7.4	8.8	9.1	8.9	8.5	9.3	6.1	6.6	7.0	7.1	7.1	7.8
Grouped Resellers	1979	4.1	3.7	3.8	4.3	3.7	4.0	3.7	3.6	2.9	2.7	3.0	3.0	3.5
	1980	3.1	3.1	3.2	3.1	2.3	3.0	3.6	2.9	3.3	3.6	3.4	3.2	3.2
	1981	3.2	3.2	3.6	3.6	4.5	5.2	3.5	3.0	2.6	4.6	4.3	4.8	3.8
	1982	4.8	5.3	4.9	6.1	6.6	5.7	5.5	4.9	9.0	8.9	8.6	8.2	6.5
	1983	7.1	7.2	7.5	8.7	9.0	6.8	9.1	5.4	8.4	8.3	6.0	7.2	7.6
(b) Greater Montreal/Quebec														
Largest Two Resellers	1979	2.2	3.2	2.6	2.9	2.5	2.8	2.8	2.7	2.4	2.4	2.5	2.4	2.6
	1980	3.0	2.4	2.3	2.4	2.4	2.4	2.6	2.3	2.5	2.9	2.9	3.1	2.6
	1981	2.9	3.1	4.2	3.3	3.3	4.6	3.9	4.3	5.0	5.8	5.8	6.2	4.4
	1982	6.3	6.5	8.2	7.5	7.6	7.6	7.3	7.6	7.7	7.8	7.8	7.3	7.4
	1983	7.2	7.3	8.5	7.0	7.2	6.8	7.0	6.9	6.5	6.6	6.5	6.4	7.0
Smallest Two Resellers	1979	1.8	3.0	2.3	2.3	2.2	2.6	2.6	2.6	2.4	2.1	2.2	2.2	2.4
	1980	1.4	1.3	2.0	2.0	2.1	2.4	2.6	2.2	2.4	2.5	2.7	2.6	2.2
	1981	2.5	2.8	3.8	2.7	2.5	4.0	3.6	4.5	4.3	4.7	4.9	5.7	3.8
	1982	6.2	6.7	7.7	7.2	6.8	7.1	5.4	5.4	7.2	7.5	7.4	7.1	6.8
	1983	6.8	7.0	7.6	6.3	6.7	6.6	6.5	6.6	5.6	6.0	5.9	6.1	6.5
Grouped Resellers	1979	3.4	3.4	2.9	3.0	3.0	2.9	3.0	2.8	2.8	2.7	2.6	2.8	2.9
	1980	2.5	2.5	2.6	2.6	2.6	2.7	3.1	3.2	2.9	3.0	2.7	2.4	2.7
	1981	2.3	2.4	2.8	2.7	3.1	3.4	3.4	3.1	4.5	4.8	4.8	6.1	3.6
	1982	5.4	5.7	6.4	6.3	6.9	7.5	6.0	6.1	6.9	6.8	7.4	6.4	6.5
	1983	6.2	5.7	6.4	5.9	6.2	5.7	7.1	6.2	4.5	5.8	5.6	5.4	5.9

TABLE L-10

Monthly Gross Margins (Based on Weighted Average Realizations Data) Available to the Largest Two, Smallest Two and Grouped Resellers of Heating Oil, 1979 to 1983, In Constant 1981 Cents Per Litre

	Year	January	February	March	April	May	June	July	August	September	October	November	December	Ave.
(a) Greater Toronto/Ontario														
Largest Two Resellers	1979	5.2	4.9	4.6	5.1	4.1	4.0	4.1	4.3	3.5	3.5	3.6	3.5	4.2
	1980	3.6	3.5	3.6	3.5	3.4	3.3	3.4	2.9	3.1	3.8	4.1	4.0	3.5
	1981	3.5	4.4	4.1	3.5	2.2	3.4	3.6	3.1	4.3	4.6	5.2	5.6	4.0
	1982	5.6	5.8	5.6	5.8	6.1	6.1	5.8	6.0	5.8	6.8	7.0	6.7	6.1
	1983	7.0	6.6	6.7	7.5	7.3	6.2	6.7	6.8	7.3	6.0	6.8	6.7	6.8
Smallest Two Resellers	1979	4.4	4.0	3.7	4.2	3.4	3.4	3.1	2.6	3.2	3.4	3.4	3.2	3.5
	1980	3.4	3.4	3.4	3.3	3.3	3.2	n.a.	n.a.	2.9	3.2	3.4	3.4	3.3
	1981	3.3	3.4	3.4	3.2	2.4	2.8	2.8	2.3	2.2	3.4	3.6	3.7	3.0
	1982	4.9	5.3	6.4	6.6	6.8	6.7	4.2	4.9	6.4	6.5	7.1	7.5	6.1
	1983	6.4	6.4	7.5	7.8	7.7	7.2	7.8	5.1	5.5	5.8	5.9	5.9	6.6
Grouped Resellers	1979	5.3	4.8	4.8	5.4	4.6	5.0	4.6	4.4	3.5	3.3	3.6	3.6	4.4
	1980	3.7	3.6	3.7	3.6	2.6	3.4	4.0	3.2	3.6	3.9	3.7	3.4	3.5
	1981	3.4	3.4	3.7	3.7	4.6	5.2	3.5	3.0	2.5	4.4	4.1	4.6	3.8
	1982	4.6	5.0	4.5	5.6	6.0	5.1	4.9	4.3	7.9	7.8	7.5	7.1	5.9
	1983	6.2	6.2	6.4	7.5	7.7	5.7	7.7	4.5	7.0	6.9	5.0	6.0	6.4
(b) Greater Montreal/Quebec														
Largest Two Resellers	1979	2.9	4.1	3.3	3.7	3.1	3.5	3.5	3.3	2.9	2.9	3.0	2.9	3.3
	1980	3.6	2.8	2.7	2.8	2.7	2.7	2.9	2.5	2.8	3.2	3.1	3.3	2.9
	1981	3.1	3.2	4.3	3.4	3.4	4.6	3.9	4.2	4.9	5.6	5.6	5.9	4.3
	1982	5.9	6.1	7.6	6.9	6.9	6.8	6.5	6.7	6.8	6.8	6.8	6.3	6.7
	1983	6.3	6.4	7.3	6.0	6.2	5.8	5.9	5.8	5.5	5.5	5.4	5.3	6.0
Smallest Two Resellers	1979	2.3	3.9	2.9	2.9	2.8	3.3	3.2	3.2	2.9	2.5	2.6	2.6	2.9
	1980	1.7	1.5	2.3	2.3	2.4	2.7	2.9	2.4	2.6	2.7	2.9	2.8	2.4
	1981	2.6	2.9	3.9	2.8	2.5	4.0	3.6	4.4	4.2	4.6	4.7	5.4	3.8
	1982	5.8	6.2	7.1	6.6	6.2	6.3	4.8	4.8	6.3	6.6	6.4	6.2	6.1
	1983	5.9	6.1	6.5	5.4	5.7	5.6	5.5	5.6	4.7	5.0	4.9	5.1	5.5
Grouped Resellers	1979	4.4	4.4	3.7	3.8	3.8	3.6	3.7	3.4	3.4	3.3	3.1	3.3	3.7
	1980	3.0	2.9	3.0	3.0	3.0	3.1	3.5	3.5	3.2	3.3	2.9	2.6	3.1
	1981	2.4	2.5	2.9	2.8	3.2	3.4	3.4	3.1	4.4	4.7	4.6	3.8	3.6
	1982	5.1	5.3	5.9	5.8	6.2	6.7	5.3	5.4	6.1	5.9	6.4	5.6	5.8
	1983	5.4	5.0	5.5	5.1	5.3	4.8	6.0	5.2	3.8	4.8	4.7	4.5	5.0

TABLE L-11

Monthly Gross Margins Available to the Largest Two, Smallest Two and Grouped Resellers of Regular Leaded Gasoline, 1979 to 1983, In Cents Per Litre

	Year	January	February	March	April	May	June	July	August	September	October	November	December	Ave.
(a) Greater Toronto/Ontario														
Largest Two Resellers	1979	2.8	1.7	2.1	2.2	1.7	1.6	1.9	2.5	2.0	2.4	2.5	2.5	2.2
	1980	2.2	2.2	2.0	2.5	2.1	3.1	3.3	3.6	3.8	4.7	4.8	4.6	3.2
	1981	4.2	4.2	4.1	4.5	4.6	4.6	5.0	5.4	5.6	5.5	5.5	5.5	4.9
	1982	5.2	5.4	4.5	4.9	5.9	4.9	5.6	6.9	6.1	4.8	6.5	6.9	5.6
	1983	6.2	8.0	9.2	3.2	5.4	9.4	8.7	8.1	7.8	5.7	5.2	8.3	7.1
Smallest Two Resellers	1979	3.2	3.2	1.9	1.7	2.2	1.3	1.6	2.1	2.4	2.1	2.0	2.2	2.2
	1980	2.0	2.0	1.7	1.7	1.6	1.7	2.6	1.9	2.4	1.9	2.9	2.9	2.1
	1981	2.9	2.9	3.0	3.1	3.1	3.1	3.1	3.4	3.0	3.0	2.6	1.6	2.9
	1982	2.9	2.6	2.3	3.4	4.3	3.7	4.2	6.0	5.7	2.4	4.5	4.8	3.9
	1983	2.0	2.4	5.8	(2.5)	(5.0)	5.9	5.4	6.5	5.6	2.7	1.1	4.7	2.9
Grouped Resellers	1979	3.4	3.4	3.2	3.3	2.7	2.8	2.9	3.3	2.7	3.1	3.1	3.2	3.1
	1980	2.8	2.7	2.8	2.7	2.9	2.8	3.0	3.0	3.4	3.1	3.0	3.2	3.0
	1981	3.7	3.7	3.9	3.9	4.3	4.3	4.4	4.9	4.6	4.8	4.9	4.6	4.3
	1982	4.6	4.9	4.5	4.6	5.3	4.0	5.1	6.3	5.4	3.6	5.9	6.3	5.0
	1983	4.0	5.7	9.2	1.7	0.0	14.4	10.7	8.2	7.7	6.2	4.9	9.6	6.9
(b) Greater Montreal/Quebec														
Largest Two Resellers	1979	2.0	2.7	3.1	3.3	2.6	3.2	3.1	3.0	2.4	2.7	3.0	2.6	2.8
	1980	3.6	2.8	2.6	2.9	3.1	3.7	4.4	3.8	4.8	3.7	3.7	4.0	3.6
	1981	3.7	3.9	4.0	3.3	3.6	5.8	5.6	5.8	6.3	6.4	7.0	5.7	5.1
	1982	5.6	4.5	4.9	6.4	6.2	6.4	6.8	7.0	6.5	7.1	5.9	5.9	6.1
	1983	5.3	3.2	9.1	4.0	3.8	6.9	7.6	7.5	5.4	6.5	4.0	9.7	6.1
Smallest Two Resellers	1979	1.5	1.5	2.3	2.2	1.3	2.1	2.1	1.9	1.3	1.4	1.8	1.6	1.8
	1980	1.8	1.4	1.3	1.6	1.6	1.7	2.3	1.6	2.8	1.3	1.6	1.5	1.7
	1981	2.1	1.6	1.6	1.1	3.6	2.7	1.9	3.6	2.1	1.6	2.9	1.3	2.2
	1982	0.1	(0.1)	0.1	4.8	2.3	5.3	2.3	4.3	4.3	3.2	2.6	1.6	2.6
	1983	1.4	(0.2)	4.9	1.3	(0.5)	3.8	2.9	3.6	4.3	3.7	1.3	6.3	2.7
Grouped Resellers	1979	3.2	3.0	3.3	3.6	2.2	3.0	3.8	4.4	4.5	3.1	3.4	3.1	3.4
	1980	3.0	2.9	2.9	3.0	3.2	3.1	3.8	3.6	4.5	3.4	3.3	3.6	3.4
	1981	3.8	3.6	3.6	3.5	4.0	4.5	4.8	4.7	5.5	5.6	6.3	5.2	4.6
	1982	4.8	3.4	3.3	5.4	6.2	5.1	5.7	6.9	7.0	6.4	6.2	6.5	5.6
	1983	5.3	2.6	7.6	3.6	2.9	8.3	6.8	6.9	5.0	6.0	2.9	9.6	5.6

TABLE L-12

Monthly Gross Margins Available to the Largest Two, Smallest Two and Grouped Resellers of Regular Leaded Gasoline, 1979 to 1983, In Constant 1981 Cents Per Litre

	Year	January	February	March	April	May	June	July	August	September	October	November	December	Ave.
(a) Greater Toronto/Ontario														
Largest Two Resellers	1979	3.6	2.2	2.7	2.8	2.1	2.0	2.3	3.1	2.4	2.9	3.0	3.0	2.7
	1980	2.6	2.6	2.3	2.9	2.4	3.5	3.7	4.0	4.2	5.1	5.2	4.9	3.6
	1981	4.4	4.4	4.2	4.6	4.7	4.6	4.9	5.3	5.5	5.3	5.3	5.3	4.9
	1982	4.9	5.1	4.2	4.5	5.3	4.4	5.0	6.1	5.4	4.2	5.6	6.0	5.1
	1983	5.4	6.9	7.9	2.8	4.6	7.9	7.3	6.8	6.5	4.8	4.3	6.9	6.0
Smallest Two Resellers	1979	4.2	4.1	2.4	2.1	2.7	1.6	2.0	2.6	2.9	2.5	2.4	2.6	2.7
	1980	2.4	2.3	2.0	2.0	1.8	1.9	2.9	2.1	2.6	2.1	3.1	3.1	2.4
	1981	3.1	3.0	3.1	3.2	3.2	3.1	3.1	3.3	2.9	2.9	2.5	1.5	2.9
	1982	2.8	2.4	2.1	3.1	3.9	3.3	3.7	5.3	5.0	2.1	3.9	4.2	3.5
	1983	1.7	2.1	5.0	(2.2)	(4.3)	5.0	4.6	5.4	4.7	2.3	0.9	3.9	2.4
Grouped Resellers	1979	4.4	4.4	4.1	4.2	3.4	3.5	3.6	4.1	3.3	3.8	3.7	3.8	3.9
	1980	3.3	3.2	3.2	3.1	3.3	3.2	3.4	3.3	3.7	3.4	3.2	3.4	3.3
	1981	3.9	3.9	4.0	4.0	4.4	4.3	4.4	4.8	4.5	4.6	4.7	4.4	4.3
	1982	4.4	4.6	4.2	4.2	4.8	3.6	4.5	5.3	4.8	3.2	5.1	5.5	4.5
	1983	3.5	4.9	7.9	1.5	0.0	12.1	9.0	6.9	6.4	5.2	4.1	8.0	5.8
(b) Greater Montreal/Quebec														
Largest Two Resellers	1979	2.6	3.5	3.9	4.2	3.3	4.0	3.8	3.7	2.9	3.3	3.6	3.1	3.5
	1980	4.3	3.3	3.0	3.4	3.5	4.2	4.9	4.2	5.3	4.0	4.0	4.3	4.0
	1981	3.9	4.1	4.1	3.4	3.7	5.8	5.6	5.7	6.2	6.2	6.7	5.4	5.1
	1982	5.3	4.2	4.5	5.9	5.6	5.7	6.0	6.2	5.7	6.2	5.1	5.1	5.5
	1983	4.6	2.8	7.8	3.4	4.2	5.9	6.4	6.3	4.5	5.4	3.3	8.1	5.1
Smallest Two Resellers	1979	2.0	1.9	2.9	2.8	1.6	2.6	2.6	2.3	1.6	1.7	2.2	1.9	2.2
	1980	2.1	1.6	1.5	1.9	1.8	1.9	2.6	1.8	3.1	1.4	1.7	1.6	1.9
	1981	2.2	1.7	1.7	1.1	3.7	2.7	1.9	3.5	2.1	1.6	2.8	1.2	2.2
	1982	0.1	(0.1)	0.1	4.4	2.1	4.7	2.0	3.8	3.8	2.8	2.3	1.4	2.3
	1983	1.2	(0.2)	4.2	1.1	(0.4)	3.2	2.5	3.0	3.6	3.1	1.1	5.2	2.3
Grouped Resellers	1979	4.2	3.9	4.2	4.5	2.8	3.8	4.7	5.4	5.5	3.7	4.1	3.7	4.2
	1980	3.6	3.4	3.4	3.5	3.7	3.5	4.2	4.0	4.9	3.7	3.5	3.9	3.8
	1981	4.0	3.8	3.7	3.6	4.1	4.5	4.8	4.6	5.4	5.4	6.1	4.9	4.6
	1982	4.5	3.2	3.0	4.9	5.6	4.6	5.1	6.1	6.1	5.6	5.4	5.6	5.0
	1983	4.5	2.3	6.5	3.1	(2.5)	7.0	5.8	5.8	4.2	5.0	2.4	8.0	4.8

TABLE L-13

Monthly Gross Margins Available to the Largest Two, Smallest Two and Grouped Resellers of Regular Unleaded Gasoline, 1979 to 1983, In Cents Per Litre

	Year	January	February	March	April	May	June	July	August	September	October	November	December	Ave.
(a) Greater Toronto/Ontario														
Largest Two Resellers	1979	3.6	2.3	2.9	2.8	2.5	2.3	2.6	2.8	2.7	2.9	2.9	3.0	2.8
	1980	2.6	2.6	2.4	2.6	2.5	3.3	3.4	3.4	3.2	4.9	4.7	5.0	3.4
	1981	4.5	4.5	4.7	5.0	4.5	5.0	5.4	5.4	5.9	5.7	6.0	6.6	5.3
	1982	5.7	5.9	5.8	5.5	6.6	5.7	5.6	6.8	7.7	6.3	6.8	7.0	6.3
	1983	6.7	8.7	9.4	5.2	7.9	9.3	8.6	8.2	8.4	5.5	4.5	8.1	7.5
Smallest Two Resellers	1979	n.a.	n.a.	2.1	1.8	2.6	1.4	1.7	2.1	2.5	1.7	2.0	1.6	2.0
	1980	2.0	1.9	1.2	0.8	0.9	0.8	(1.7)	0.6	2.4	1.1	2.8	n.a.	1.2
	1981	n.a.	n.a.	n.a.	2.8	n.a.	n.a.	n.a.	2.8	n.a.	n.a.	2.3	n.a.	2.6
	1982	3.9	3.2	4.2	4.6	5.6	5.2	4.8	6.4	8.1	4.4	5.4	4.9	5.1
	1983	1.5	2.7	6.4	0.2	(1.0)	7.8	5.9	6.7	6.2	2.6	0.2	4.3	3.6
Grouped Resellers	1979	4.0	4.0	3.8	3.8	3.5	3.3	3.6	3.7	3.4	3.9	3.9	3.8	3.7
	1980	3.1	3.0	2.9	2.9	3.2	3.0	3.1	3.0	3.0	3.5	3.2	3.4	3.1
	1981	3.9	4.0	4.1	4.2	4.3	4.3	4.6	4.7	4.8	5.0	5.0	5.3	4.5
	1982	5.1	5.4	5.4	5.6	6.0	4.6	4.9	6.0	6.4	5.1	6.2	6.1	5.6
	1983	4.4	6.3	8.6	3.4	1.6	12.0	10.2	7.9	8.2	5.6	4.3	9.1	6.8
(b) Greater Montreal/Quebec														
Largest Two Resellers	1979	2.7	3.3	4.2	3.6	2.7	3.5	3.3	3.4	3.1	3.3	3.3	3.4	3.3
	1980	3.9	4.0	3.3	3.5	3.6	3.7	3.7	4.1	3.7	4.3	4.6	4.7	3.9
	1981	4.4	4.7	4.7	4.1	4.8	6.6	6.5	6.6	7.3	7.4	7.0	6.9	5.9
	1982	7.4	6.0	5.8	6.8	7.2	7.5	7.6	7.4	7.6	7.8	7.9	6.8	7.2
	1983	5.8	4.3	9.8	4.7	6.8	7.9	8.6	7.5	7.0	6.3	5.1	6.9	6.7
Smallest Two Resellers	1979	2.3	2.3	3.6	2.5	1.6	2.3	2.4	2.4	2.5	2.6	2.6	1.9	2.4
	1980	3.4	2.7	2.5	2.5	2.4	2.6	2.6	2.2	2.5	2.3	3.6	2.8	2.7
	1981	2.3	4.4	4.9	3.7	5.9	3.4	3.4	3.4	4.0	3.5	3.9	3.0	3.8
	1982	4.0	2.2	2.3	3.1	5.8	4.7	4.6	4.6	8.1	6.8	6.3	3.5	4.7
	1983	4.3	0.3	7.7	3.8	4.6	5.0	3.3	3.8	5.3	3.2	2.8	5.9	4.2
Grouped Resellers	1979	4.0	3.9	4.4	3.2	2.5	3.9	4.2	5.0	6.3	4.1	4.0	4.1	4.1
	1980	4.0	4.2	3.9	3.9	4.0	3.9	4.0	4.2	4.1	4.0	4.5	4.5	4.1
	1981	4.4	4.6	4.2	4.6	5.1	5.1	5.6	5.5	6.3	6.4	6.1	6.1	5.3
	1982	6.6	5.1	3.9	5.8	6.8	5.9	6.3	7.4	8.0	7.3	7.8	7.4	6.5
	1983	5.4	3.7	8.1	4.1	4.7	8.5	7.4	6.9	6.0	5.5	3.9	7.6	6.0

TABLE L-14

Monthly Gross Margins Available to the Largest Two, Smallest Two and Grouped Resellers of Regular Unleaded Gasoline, 1979 to 1983, In Constant 1981 Cents Per Litre

	Year	January	February	March	April	May	June	July	August	September	October	November	December	Ave.
(a) Greater Toronto/Ontario														
Largest Two Resellers	1979	4.7	3.0	3.7	3.5	3.1	2.9	3.2	3.4	3.3	3.5	3.5	3.6	3.5
	1980	3.1	3.0	2.8	3.0	2.9	3.7	3.8	3.8	3.5	5.3	5.1	5.4	3.8
	1981	4.8	4.7	4.9	5.1	4.6	5.0	5.3	5.3	5.8	5.5	5.8	6.3	5.3
	1982	5.4	5.5	5.4	5.0	6.0	5.1	5.0	6.0	6.8	5.5	5.9	6.1	5.6
	1983	5.8	7.5	8.0	4.5	6.8	7.8	7.2	6.9	7.0	4.6	3.8	6.7	6.4
Smallest Two Resellers	1979	n.a.	n.a.	2.6	2.3	3.2	1.7	2.1	2.6	3.0	2.1	2.4	1.9	2.4
	1980	2.4	2.2	1.4	0.9	1.0	0.9	(1.9)	0.7	2.6	1.2	3.0	n.a.	1.3
	1981	n.a.	n.a.	n.a.	2.9	n.a.	n.a.	n.a.	2.8	n.a.	n.a.	2.2	n.a.	2.6
	1982	3.7	3.0	3.9	4.2	5.1	4.6	4.3	5.7	7.1	3.9	4.7	4.2	4.5
	1983	1.3	2.3	5.5	0.2	(0.9)	6.6	5.0	5.6	5.2	2.2	0.2	3.6	3.1
Grouped Resellers	1979	5.2	5.1	4.8	4.8	4.4	4.1	4.4	4.5	4.1	4.7	4.7	4.5	4.6
	1980	3.7	3.5	3.4	3.3	3.6	3.4	3.5	3.3	3.3	3.8	3.5	3.6	3.5
	1981	4.1	4.2	4.2	4.3	4.4	4.3	4.5	4.6	4.7	4.8	4.8	5.1	4.5
	1982	4.9	5.1	5.0	5.1	5.4	4.1	4.4	5.3	5.6	4.5	5.4	5.3	5.0
	1983	3.8	5.4	7.4	2.9	1.4	10.1	8.6	6.6	6.9	4.7	3.6	7.6	5.8
(b) Greater Montreal/Quebec														
Largest Two Resellers	1979	3.5	4.2	5.3	4.5	3.4	4.4	4.1	4.2	3.8	4.0	4.0	4.0	4.1
	1980	4.6	4.7	3.8	4.1	4.1	4.2	4.1	4.5	4.1	4.7	4.9	5.0	4.4
	1981	4.6	4.9	4.9	4.2	4.9	6.6	6.5	6.5	7.1	7.2	6.7	6.5	5.9
	1982	7.0	5.6	5.4	6.2	6.5	6.7	6.7	6.5	6.7	6.8	6.8	5.9	6.4
	1983	5.1	3.7	8.4	4.0	5.8	6.7	7.3	6.3	5.9	5.3	4.2	5.7	5.7
Smallest Two Resellers	1979	3.0	3.0	4.6	3.1	2.0	2.9	3.0	2.9	3.0	3.1	3.1	2.3	3.0
	1980	4.0	3.2	2.9	2.9	2.7	2.9	2.9	2.4	2.7	2.5	3.9	3.0	3.0
	1981	2.4	4.6	5.1	3.8	6.0	3.4	3.3	3.3	3.9	3.4	3.8	2.8	3.8
	1982	3.8	2.0	2.1	2.8	5.2	4.2	4.1	4.1	7.1	5.9	5.5	3.0	4.2
	1983	3.8	0.3	6.6	3.3	3.9	4.2	2.8	3.2	4.5	2.7	2.3	4.9	3.5
Grouped Resellers	1979	5.2	5.0	5.6	4.0	3.1	4.9	5.2	6.1	7.7	4.9	4.8	4.9	5.1
	1980	4.7	4.9	4.5	4.5	4.6	4.4	4.5	4.6	4.5	4.4	4.8	4.8	4.6
	1981	4.6	4.8	4.3	4.7	5.2	5.1	5.6	5.4	6.2	6.2	5.9	5.8	5.3
	1982	6.2	4.7	3.6	5.3	6.1	5.3	5.6	6.5	7.0	6.4	6.8	6.4	5.8
	1983	4.7	3.2	7.0	3.5	4.0	7.2	6.3	5.8	5.0	4.6	3.2	6.3	5.1

TABLE L-15

Monthly Gross Margins (Based on Weighted Average Realizations Data) Available to the Largest Two, Smallest Two and Grouped Resellers of Regular Leaded Gasoline, 1979 to 1983, In Cents Per Litre

	Year	January	February	March	April	May	June	July	August	September	October	November	December	Ave.
(a) Greater Toronto/Ontario														
Largest Two Resellers	1979	3.1	2.1	2.4	2.5	1.8	1.8	2.1	2.9	2.3	2.7	3.0	3.2	2.5
	1980	2.9	2.6	2.7	3.0	3.0	4.0	4.2	4.2	3.8	4.4	4.3	4.4	3.6
	1981	4.3	4.1	4.5	4.6	4.6	4.5	4.5	5.3	5.1	5.1	5.0	5.0	4.7
	1982	4.8	5.2	3.7	4.9	5.5	4.3	5.1	6.9	6.4	5.6	6.6	7.6	5.6
	1983	5.4	7.6	9.4	3.3	4.0	10.2	9.6	8.0	7.8	6.7	7.3	9.5	7.4
Smallest Two Resellers	1979	3.2	3.2	1.5	1.2	2.9	0.9	1.2	1.8	1.8	2.2	1.8	2.1	2.0
	1980	1.7	1.6	1.5	1.0	0.7	0.9	2.6	1.1	1.7	1.2	2.9	2.9	1.7
	1981	2.9	2.9	3.0	3.1	3.1	3.1	3.1	3.4	3.0	3.0	2.6	1.6	2.9
	1982	3.4	4.0	3.2	4.2	4.8	4.5	5.0	6.8	6.9	3.1	5.2	5.2	4.7
	1983	1.9	2.3	6.7	(1.8)	(4.5)	6.5	5.6	6.7	5.5	2.6	1.2	4.7	3.1
Grouped Resellers	1979	3.4	3.4	3.3	3.3	2.8	2.9	3.0	3.4	2.7	3.2	3.1	3.2	3.1
	1980	2.8	2.8	2.8	2.7	3.0	2.8	3.0	3.0	3.5	3.2	3.1	3.2	3.0
	1981	3.6	3.5	3.8	3.8	4.0	4.0	3.9	4.5	4.3	4.5	4.6	4.4	4.1
	1982	4.3	4.7	4.1	5.0	5.0	3.8	4.8	6.0	5.2	3.4	5.8	6.1	4.9
	1983	4.2	5.9	8.7	2.0	0.3	13.5	10.2	8.3	7.6	6.0	4.6	8.6	6.6
(b) Greater Montreal/Quebec														
Largest Two Resellers	1979	2.3	2.8	3.2	3.7	2.6	3.5	3.3	3.2	3.3	3.0	3.1	2.7	3.1
	1980	4.1	2.9	2.9	3.1	3.5	3.9	4.7	4.0	5.1	4.1	4.2	4.3	3.9
	1981	4.0	3.6	5.0	3.5	3.7	5.6	5.7	5.5	6.4	6.4	7.0	5.4	5.2
	1982	5.2	4.2	5.2	6.7	6.8	6.0	6.6	7.1	6.2	6.7	6.1	5.4	6.0
	1983	4.7	2.5	8.4	4.4	3.7	8.3	8.8	8.7	6.6	7.5	4.5	10.8	6.6
Smallest Two Resellers	1979	1.6	1.4	2.3	2.3	1.6	2.1	2.4	2.1	1.3	1.5	1.8	1.8	1.9
	1980	1.8	2.3	1.7	1.8	2.7	1.7	3.3	2.1	3.2	2.2	2.2	2.0	2.3
	1981	2.5	2.3	3.5	2.0	2.7	3.1	2.4	2.8	2.6	2.2	3.8	2.1	2.7
	1982	1.1	0.5	1.8	5.5	3.8	4.4	4.6	5.0	5.8	5.1	3.1	2.4	3.6
	1983	1.9	0.3	4.7	3.1	1.4	3.6	3.3	3.2	4.6	3.9	2.8	7.0	3.3
Grouped Resellers	1979	3.4	3.1	3.6	3.9	2.9	3.7	3.8	4.2	3.4	3.2	3.3	3.1	3.5
	1980	3.2	2.9	3.0	2.9	3.3	3.2	3.8	3.4	4.3	3.3	3.2	3.4	3.3
	1981	4.1	3.6	3.6	3.5	4.1	4.8	5.2	5.1	5.6	5.8	6.4	5.4	4.8
	1982	4.9	3.8	3.5	5.5	6.2	5.3	5.9	7.0	6.9	6.2	6.0	6.4	5.6
	1983	5.3	2.2	7.5	3.6	2.5	7.6	6.7	6.7	4.8	5.8	3.0	9.6	5.4

TABLE L-16

Monthly Gross Margins (Based on Weighted Average Realizations Data) Available to the Largest Two, Smallest Two and Grouped Resellers of Regular Leaded Gasoline, 1979 to 1983, In Constant 1981 Cents Per Litre

	Year	January	February	March	April	May	June	July	August	September	October	November	December	Ave.
(a) Greater Toronto/Ontario														
Largest Two Resellers	1979	4.0	2.7	3.0	3.2	2.2	2.2	2.6	3.6	2.8	3.3	3.6	3.8	3.1
	1980	3.4	3.0	3.1	3.5	3.4	4.5	4.7	4.7	4.2	4.8	4.7	4.7	4.1
	1981	4.6	4.3	4.6	4.7	4.7	4.5	4.5	5.2	5.0	4.9	4.8	4.8	4.7
	1982	4.6	4.9	3.4	4.5	5.0	3.8	4.5	6.1	5.6	4.9	5.7	6.6	5.0
	1983	4.7	6.6	8.0	2.8	3.4	8.6	8.1	6.7	6.5	5.6	6.1	7.9	6.3
Smallest Two Resellers	1979	4.2	4.1	1.9	1.5	3.6	1.1	1.5	2.2	2.2	2.7	2.2	2.5	2.5
	1980	2.0	1.9	1.7	1.2	0.8	1.0	2.9	1.2	1.9	1.3	3.1	3.1	1.8
	1981	3.1	3.0	3.1	3.2	3.2	3.1	3.1	3.3	2.9	2.9	2.5	1.5	2.9
	1982	3.2	3.8	3.0	3.8	4.3	4.0	4.4	6.0	6.1	2.7	4.5	4.5	4.2
	1983	1.7	2.0	5.7	(1.5)	(3.9)	5.5	4.7	5.6	4.6	2.2	1.0	3.9	2.6
Grouped Resellers	1979	4.4	4.4	4.2	4.2	3.5	3.6	3.7	4.2	3.3	3.9	3.7	3.8	3.9
	1980	3.3	3.3	3.2	3.1	3.4	3.2	3.4	3.3	3.9	3.5	3.4	3.4	3.4
	1981	3.8	3.7	3.9	3.9	4.1	4.0	3.9	4.4	4.2	4.3	4.4	5.8	4.2
	1982	4.1	4.4	3.8	4.6	4.5	3.4	4.3	5.3	4.6	3.0	5.0	5.3	4.4
	1983	3.7	5.1	7.4	1.7	0.3	11.4	8.6	7.0	6.4	5.0	3.8	7.1	5.6
(b) Greater Montreal/Quebec														
Largest Two Resellers	1979	3.0	3.6	4.1	4.7	3.3	4.4	4.1	3.9	4.0	3.6	3.7	3.2	3.8
	1980	4.9	3.4	3.4	3.6	4.0	4.4	5.3	4.4	5.6	4.5	4.5	4.6	4.4
	1981	4.2	3.8	5.2	3.6	3.8	5.6	5.7	5.4	6.3	6.2	6.7	5.1	5.1
	1982	4.9	3.9	4.8	6.1	6.1	5.4	5.9	6.3	5.4	5.9	5.3	4.7	5.4
	1983	4.1	2.2	7.2	3.8	3.2	7.0	7.5	7.3	5.5	6.3	3.7	9.0	5.6
Smallest Two Resellers	1979	2.1	1.8	2.9	2.9	2.0	2.6	3.0	2.6	1.6	1.8	2.2	2.1	2.3
	1980	2.1	2.7	2.0	2.1	3.1	1.9	3.7	2.3	3.5	2.4	2.4	2.1	2.5
	1981	2.6	2.4	3.6	2.0	2.7	3.1	2.4	2.8	2.5	2.1	3.7	2.0	2.7
	1982	1.0	0.5	1.7	5.0	3.4	3.9	4.1	4.4	5.1	4.5	2.7	2.1	3.2
	1983	1.7	0.3	4.0	2.7	1.2	3.1	2.8	2.7	3.9	3.3	2.3	5.8	2.8
Grouped Resellers	1979	4.4	4.0	4.6	4.9	3.6	4.6	4.7	5.2	4.1	3.9	3.9	3.7	4.3
	1980	3.8	3.4	3.5	3.4	3.8	3.6	4.2	3.8	4.7	3.6	3.4	3.6	3.7
	1981	4.3	3.8	3.7	3.6	4.2	4.8	5.2	5.0	5.5	5.6	6.2	5.1	4.8
	1982	4.6	3.5	3.2	5.0	5.6	4.7	5.2	6.2	6.1	5.4	5.2	5.6	5.0
	1983	4.6	1.9	6.5	3.1	2.1	6.5	5.7	5.6	4.0	4.8	2.5	8.0	4.6

TABLE L-17

Monthly Gross Margins (Based on Weighted Average Realizations Data) Available to the Largest Two, Smallest Two and Grouped Resellers of Regular Unleaded Gasoline, 1979 to 1983, In Cents Per Litre

	Year	January	February	March	April	May	June	July	August	September	October	November	December	Ave.
(a) Greater Toronto/Ontario														
Largest Two Resellers	1979	3.9	2.9	3.3	3.1	2.8	2.8	2.8	3.2	3.1	3.1	3.5	3.8	3.2
	1980	3.6	3.3	3.1	3.4	3.7	4.7	4.4	4.2	3.6	4.8	4.8	4.9	4.0
	1981	4.9	4.7	5.1	5.3	4.9	5.1	5.2	5.4	5.5	5.6	5.4	6.2	5.3
	1982	5.5	5.9	5.1	5.4	6.2	5.2	5.1	6.6	7.7	7.3	7.1	7.7	6.2
	1983	6.2	8.3	8.9	5.2	6.6	9.9	9.6	8.1	8.5	6.6	6.7	9.3	7.8
Smallest Two Resellers	1979	n.a.	n.a.	2.2	2.0	3.0	1.4	1.7	2.1	2.5	1.5	2.3	1.6	2.0
	1980	2.3	2.0	1.2	0.8	0.9	0.8	(1.7)	0.6	2.3	1.1	2.8	n.a.	1.2
	1981	n.a.	n.a.	n.a.	2.8	n.a.	n.a.	n.a.	2.8	n.a.	n.a.	2.3	n.a.	2.6
	1982	4.1	3.1	4.2	4.5	5.6	5.2	4.7	6.3	8.1	4.4	5.4	4.9	5.0
	1983	1.5	n.a.	6.4	0.2	(0.9)	7.8	5.9	6.7	6.2	2.6	0.8	4.9	3.8
Grouped Resellers	1979	4.0	4.0	3.9	3.8	3.5	3.4	3.7	3.7	3.4	3.9	3.9	3.9	3.8
	1980	3.2	3.2	3.0	2.9	3.2	3.0	3.2	3.1	3.1	3.5	3.2	3.4	3.2
	1981	3.9	3.9	4.0	4.1	4.1	4.1	4.2	4.3	4.5	4.7	4.7	5.1	4.3
	1982	4.8	5.3	5.0	5.0	5.6	4.3	4.7	5.4	6.1	4.8	5.9	5.9	5.2
	1983	4.2	6.5	8.1	3.8	2.3	10.3	9.6	7.7	7.9	5.4	4.0	8.3	6.5
(b) Greater Montreal/Quebec														
Largest Two Resellers	1979	3.2	3.4	4.4	4.0	2.6	4.0	3.7	3.5	4.1	3.9	3.5	3.8	3.7
	1980	4.5	4.0	3.5	3.8	4.2	4.5	4.6	4.5	4.7	4.7	5.1	5.0	4.4
	1981	4.8	4.5	5.0	4.0	4.4	5.9	6.8	6.4	7.6	7.6	7.1	6.8	5.9
	1982	6.7	5.8	5.4	7.4	9.1	6.8	7.4	7.5	7.2	7.7	8.0	6.2	7.1
	1983	5.2	3.4	9.2	5.1	7.0	8.4	8.8	8.3	7.9	7.0	5.5	7.8	7.0
Smallest Two Resellers	1979	2.6	2.0	3.5	2.4	1.5	2.0	2.1	2.3	2.3	2.3	2.2	0.7	2.2
	1980	2.8	2.2	1.9	1.9	2.1	2.1	2.1	1.9	2.0	2.0	4.0	2.6	2.3
	1981	1.8	4.4	4.8	3.6	7.2	2.7	3.4	3.3	4.1	3.5	3.7	2.7	3.8
	1982	4.0	2.3	2.3	3.0	7.8	4.0	4.0	3.9	n.a.	8.8	8.4	3.3	4.7
	1983	6.3	1.0	9.0	7.4	7.4	4.7	3.4	3.5	6.1	2.8	3.4	6.0	5.1
Grouped Resellers	1979	4.0	3.9	4.7	4.1	3.3	4.3	4.2	4.4	4.2	4.2	3.9	4.2	4.1
	1980	4.1	4.2	3.9	4.2	4.0	4.0	4.3	4.0	4.0	3.8	4.4	4.3	4.1
	1981	4.8	5.1	4.1	4.3	4.9	5.5	6.2	6.0	6.2	6.5	6.4	6.4	5.5
	1982	6.8	5.2	4.2	5.9	7.3	6.3	6.5	7.5	7.9	7.3	7.7	7.3	6.7
	1983	5.3	3.6	8.2	3.8	4.6	7.7	6.9	6.7	5.8	5.3	3.9	7.4	5.8

TABLE L-18

Monthly Gross Margins (Based on Weighted Average Realizations Data) Available to the Largest Two, Smallest Two and Grouped Resellers of Regular Unleaded Gasoline, 1979 to 1983, In Constant 1981 Cents Per Litre

	Year	January	February	March	April	May	June	July	August	September	October	November	December	Ave.
(a) Greater Toronto/Ontario														
Largest Two Resellers	1979	5.1	3.7	4.2	3.9	3.5	3.5	3.4	3.9	3.8	3.7	4.2	4.5	4.0
	1980	4.3	3.9	3.6	3.9	4.2	5.3	4.9	4.7	4.0	5.2	5.2	5.3	4.5
	1981	5.2	4.9	5.3	5.4	5.0	5.1	5.1	5.3	5.4	5.4	5.2	5.9	5.3
	1982	5.2	5.5	4.7	4.9	5.6	4.6	4.5	5.8	6.8	6.4	6.2	6.7	5.6
	1983	5.4	7.2	7.6	4.5	5.7	8.3	8.1	6.8	7.1	5.5	5.6	7.7	6.6
Smallest Two Resellers	1979	n.a.	n.a.	2.8	2.5	3.7	1.7	2.1	2.6	3.0	1.8	2.7	1.9	2.5
	1980	2.7	2.3	1.4	0.9	1.0	0.9	(1.9)	0.7	2.5	1.2	3.0	n.a.	1.3
	1981	n.a.	n.a.	n.a.	2.9	n.a.	n.a.	n.a.	2.8	n.a.	n.a.	2.2	n.a.	2.6
	1982	3.9	2.9	3.9	4.1	5.1	4.6	4.2	5.6	7.1	3.9	4.7	4.2	4.5
	1983	1.3	n.a.	5.5	0.2	(0.8)	6.6	5.0	5.6	5.2	2.2	0.7	4.1	3.2
Grouped Resellers	1979	5.2	5.1	4.9	4.8	4.4	4.2	4.6	4.5	4.1	4.7	4.7	4.6	4.7
	1980	3.8	3.8	3.5	3.3	3.6	3.4	3.6	3.4	3.4	3.8	3.5	3.6	3.6
	1981	4.1	4.1	4.1	4.2	4.2	4.1	4.2	4.2	4.4	4.5	4.5	4.9	4.3
	1982	4.7	5.0	4.6	4.6	5.1	3.8	4.2	4.8	5.4	4.2	5.1	5.1	4.7
	1983	3.7	5.6	6.9	3.3	2.0	8.7	8.1	6.4	6.6	4.5	3.3	6.9	5.5
(b) Greater Montreal/Quebec														
Largest Two Resellers	1979	4.2	4.4	5.6	5.0	3.3	5.0	4.6	4.3	5.0	4.7	4.2	4.5	4.6
	1980	5.3	4.7	4.1	4.4	4.8	5.1	5.2	5.0	5.2	5.1	5.5	5.4	5.0
	1981	5.1	4.7	5.2	4.1	4.5	5.9	6.7	6.3	7.4	7.3	6.8	6.5	5.9
	1982	6.3	5.4	5.0	6.8	8.2	6.1	6.6	6.6	6.3	6.7	7.0	5.4	6.4
	1983	4.5	3.0	7.9	4.4	6.0	7.1	7.4	7.0	6.6	5.8	4.6	6.5	5.9
Smallest Two Resellers	1979	3.4	2.6	4.5	3.0	1.9	2.5	2.6	2.8	2.8	2.8	2.6	0.8	2.7
	1980	3.3	2.6	2.2	2.2	2.4	2.4	2.4	2.1	2.2	2.2	4.3	2.8	2.6
	1981	1.9	4.6	5.0	3.7	7.3	2.7	3.4	3.2	4.0	3.4	3.6	2.6	3.8
	1982	3.8	2.1	2.1	2.7	7.1	3.6	3.6	3.5	n.a.	7.7	7.3	2.9	4.2
	1983	5.5	0.9	7.7	6.4	6.3	4.0	2.9	2.9	5.1	2.3	2.8	5.0	4.3
Grouped Resellers	1979	5.2	5.0	6.0	5.2	4.1	5.4	5.2	5.4	5.1	5.1	4.7	5.0	5.1
	1980	4.9	4.9	4.5	4.9	4.6	4.5	4.8	4.4	4.4	4.1	4.8	4.6	4.6
	1981	5.1	5.3	4.2	4.4	5.0	5.5	6.1	5.9	6.1	6.3	6.1	6.1	5.5
	1982	6.4	4.8	3.9	5.4	6.6	5.6	5.8	6.6	7.0	6.4	6.7	6.3	6.0
	1983	4.6	3.1	7.1	3.3	3.9	6.5	5.8	5.6	4.9	4.4	3.3	6.1	4.9

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The Heating Oil Difficulties in Eastern Canada During the Winter of 1978-1979

During the period from late January until late February 1979, the supply of residential heating oil was very tight in relationship to demand in the province of Quebec and parts of eastern Ontario. These developments led to complaints to the Commission from some resellers that the refiners had deliberately reduced or held back supply to them so as to drive them from the marketplace. This analysis is intended to address these matters.

The market area chiefly affected was that served by the Montreal refineries and Ultramar's refinery at St-Romuald, east of Quebec City. In areas where there were marine storage terminals, such as Chicoutimi, Lac St-Jean, Abitibi and Sept-Isles, there were no supply problems since inventories had been brought in during the summer. Shortages were reported in an EMR study to be temporary and localized rather than continuous and widespread.[1] Several refiners were forced to put their customers (including resellers) on quota while other refiners had insufficient product to maintain sales to their resellers for a number of days. According to Mr. Servais, Director of the Distribution Branch of the Department of Energy and Resources of Quebec, no consumer in Quebec went without heating oil during the crisis, but some resellers without firm contractual commitments had to obtain supply through a central clearing house system run by the Quebec Energy and Resources Department, which brought supply-short resellers and refiners together, or to pick up product from suppliers in Ontario.

The supply difficulties were caused by a series of operating and other problems experienced by refineries in Montreal and Quebec City which resulted in the loss of over 180 million litres of fuel oil production at a time of increased demand brought on by a prolonged period of abnormally cold weather in January/February 1979.[2] Gulf's Montreal East refinery experienced an explosion and major fire on February 13, 1979 resulting in a shutdown which lead to a production loss of 285 million litres of petroleum products, including 123 million litres of heating oils. Shell lost its hydrocracker unit for one week in January and for 10 days in February resulting in the loss of 19 million litres of stove oil. The problem was localized however and Shell did not experience an overall shortage of product. Imperial Oil experienced mechanical trouble which reduced its Montreal refinery capacity to 60 per cent for a period of 13 days in late February.[3] The total loss of furnace and stove oil production for Imperial Oil was about 40 million litres. An unexpected emergency shut-down in the first week of December reduced Texaco's inventories so that while it was able to serve its own customers, it was unable to assist other marketers in a substantial way. Ultramar had a crude oil shortfall at its St-Romuald refinery. Its crude oil sources were all offshore and as a result of the upheavals associated with the overthrow of the Iranian monarchy it lost 40 per cent of its crude oil supply between November 1978 and February 1979. Petrofina and BP also reported slowdowns in refinery production in January 1979 because of the loss of some offshore crude oil supplies, as well as domestic crude oil supply problems caused by capacity constraints in the Interprovincial Pipeline.

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[1] *The Report on the Investigation of Marketing Practices for Petroleum Products* (June 1979, see Exhibit C-198B) was prepared by a task force composed of private consultants and officials of Energy, Mines and Resources Canada.

The most severe product shortfalls were experienced by Ultramar and Gulf. Ultramar placed its branded dealers on allocation and reduced its sales to resellers. Gulf entered into an emergency processing agreement with Ultramar to have Ultramar process 700,000 barrels of Gulf's crude oil for Gulf at St-Romuald, and used spare capacity at its refineries in Ontario and Nova Scotia to reinforce inventory at Montreal. Imperial Oil also had 450,000 barrels of crude oil processed by BP. In February and March 1979, 19 million litres were exchanged between Texaco and other refiners for future delivery while Texaco's Ottawa market requirements were met by their Ontario refinery.

Imperial Oil, Shell, Gulf and Texaco arranged to bring into Quebec over 123 million litres of distillates, including furnace oil, from adjoining provinces and *via* imports. Murphy Oil (Spur) secured 3.2 million litres of furnace oil from Irving Oil in New Brunswick and also moved 4.5 million litres of furnace oil by the Trans-Northern pipeline to Ottawa, of which 909,000 litres was shipped on to Montreal. Other Quebec resellers also brought in product from suppliers in Ontario.

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[2] Moreover, as the market tightened many resellers were reported by refiners to have lifted much more than their usual monthly volumes. As a result, refiners were faced with the need to meet greater than normal demand for their product from these resellers.

[3] Imperial Oil also had some operating problems with its Sarnia, Ontario refinery in February.

In response to complaints that their policies respecting supply to the reseller sector were not equitable during this period of tight supply, the refiners, including Imperial Oil, Shell, Gulf and Texaco, provided evidence which showed that the percentage of their sales of heating oils to resellers in fact rose rather than fell in early 1979.

Imperial Oil's sales to resellers in Quebec in the first and second quarters of 1979 were 9.6 and 40.4 per cent, respectively, higher than in 1978.[4] Shell's fuel oil sales to resellers during the crisis doubled in volume in comparison to the previous 1977/1978 period, while the percentage of its total 1979 heating oil sales to resellers, at 25.3 per cent, was 5.3 percentage points higher than 1978.[5] During the height of the crisis, Shell reported however that it made product available to new customers only when temporary surpluses occurred. Gulf was able to maintain supply to its contracted resellers in Montreal on a quota or allocation basis and also supplied 13.6 million litres of spot supplies to 16 non-contract resellers at the request of Mr. Servais and Federal Government authorities. While Gulf's total sales of heating fuels in Quebec and Atlantic Canada fell by 50 million litres from 1978 to 1979, its sales to resellers in 1979 rose by approximately 55 million litres.[6] Texaco put all its customers (including resellers) on a quota system in February and March 1979. However, it reported that in Quebec between November 1978 and February 1979, its sales to resellers increased in comparison to the previous 1977/1978 period and also that the rate of increase of its sales to resellers was greater than the rate of increase in Texaco's overall sales to the residential market.[7]

Suncor indicated that 65 per cent of its distillate sales in 1979 went to the reseller sector.[8] While this was 9 percentage points lower than in 1978, it still represented the majority of Suncor's sales.

No detailed information on the 1978/1979 tight supply period was provided by Petrofina and BP (which were subsequently acquired by Petro-Canada). However, several heating oil resellers in Quebec complained about the manner in which Petrofina operated its supply/allocation/quota system.[9] They testified that resellers were not treated equally because Petrofina did not impose restrictions on its own branded heating oil dealers. In contrast, other refiners, such as BP, were reported to have allowed some resellers to borrow on their quotas for future months in the critical February to April period.[10]

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[4] See Exhibit M-451, pp. XVIII — 20 to 21.

[5] See Exhibit S-32A, Volume 2, p. 7.133 and Exhibit M-399.

[6] See Exhibit M-347, pp. 25 to 28, Exhibit C-189A and Transcript, pp. 23992 to 23996.

[7] See Exhibit R-94, pp. 191 to 196.

[8] See Exhibit M-560, Table 7.

Ultramar reported that it reduced its branded dealer sales as well as its reseller business.[11] In February 1979, it ceased supplying any resellers that had not purchased product from it in January 1979.[12] Those customers who had been purchasing from Ultramar previously were put on allocation for February and March. Also, Ultramar: (a) put the branded outlets which it owned or had under term contract on allocation, (b) stopped taking on any new business, especially commercial accounts and (c) sometimes did not renew contracts with resellers. For example, in Ontario, nine heating oil distributors were advised, well in advance, that Ultramar would not renew their contracts because of supply problems.[13] All of them subsequently obtained product elsewhere. Ultramar assisted a number of them in obtaining alternative supplies.

Irving Oil Limited has consistently had a policy of not supplying resellers. However, during the crisis, it did supply Spur Oil with 3.2 million litres of furnace oil at the request of the National Energy Board[14] and, through Gulf Canada, eight resellers from the Shawinigan region with 909,000 litres of heating oils and 159,000 litres of stove oil at the request of the Government of Quebec.[15]

The EMR study's comparison of 1978/1979 sales volumes with 1977/1978 indicated that on average major and regional refiners had increased their share of the retail market for furnace oil in Quebec by 3 and 1 per cent, respectively. The EMR study concluded that this was not specifically related to the supply problems experienced in the winter of 1979, but rather was part of a continuing trend in the industry. As to the anomalous situation of the major refiners increasing their market shares while reporting higher percentage sales to resellers, the EMR study also indicated that the refiners had obtained sales in the commercial/industrial sector at the expense of resellers. Moreover, there was no relative sales data in evidence for BP, Petrofina or Ultramar.

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[9] These included: Mr. Nino Ravenda of Ravenda Incorporée in Transcript Volume 25, pp. 5539 ff.; Mr. Michel Bellemare in Transcript Volume 25, pp. 5587 ff. and 5596 ff. and Exhibit C-200; Mme Louise Dubé of Verne et Laurin Inc., in Transcript Volume 25, pp. 5943 ff.

[10] See Volume 25, pp. 5551 ff. for the testimony of Mr. Nino Ravenda.

[11] Transcript, pp. 18452 to 58, 18510 to 19, 28415 to 16, 28424 to 26, 28428 to 28517.

[12] See Exhibit M-536 for a list of these resellers.

[13] Transcript, p. 28428.

[14] See Exhibit C-198B, p. 10.

[15] Transcript, Vol. 97, pp. 18166 to 70 and 18274 to 75.

The foregoing evidence suggests that refiners as a group did not take advantage of the tight supply period to squeeze resellers out of the residential heating oil market. Indeed, several refiners made special efforts to supply resellers. However, without the role played by both the Federal and Quebec governments in assuring that resellers received any surplus supplies held by refiners and other resellers the impact of the tight supply period on some of the resellers would no doubt have been greater.

Mr. Servais said that in his opinion the resellers were able to meet the demands of their customers during the period of tight supply although they were not always able to obtain the volumes they wished to have. He attributed much of the difficulty encountered to lack of contractual supply arrangements. He advised the Commission that in 1979/1980 his office wrote to resellers urging them to arrange contracts with suppliers, but that most resellers appeared to have ignored this advice — choosing instead to face the risk of future supply disruptions in exchange for the advantages of using the spot market.

Resellers who appeared before the Commission complained that light fuel oil was exported from Quebec in the face of a local tightness of supply. The greater part of these exports was in late 1978, particularly in November. The EMR task force examined these exports on the basis of information supplied by the refiners and the terminal operators. The report set forth statistics on exports of middle distillates from Eastern Canada from November 1978 to February 1979. It is apparent that the major refiners (Imperial Oil, Shell and Texaco) were responsible for very little of this activity; Ultramar along with two terminal operators (Canadian Fuel Marketers and Metropolitan Petroleum), were the principal exporters. The Ultramar Group of companies exported 332 million litres of middle distillates during the tight supply period pursuant to contracts entered into before the supply difficulties developed. The only substantial refiner exports from Atlantic Canada were those of Irving Oil from Saint John, New Brunswick.

The report also noted that export licences were approved by the National Energy Board much earlier than the shipment date. It concluded that there were "no unusual occurrences relating to these exports". However the task force recommended that the National Energy Board make export licences conditional on Canadian supply adequacy at the time of shipment rather than only at the time of granting of the licence.

The supply dynamics of the period can be examined in Statistics Canada's monthly net supply and net sales data for Nos. 2 and 3 light fuel oils and for kerosene and stove oil, respectively, in Quebec for the periods September 1977 to April 1978, and September 1978 to April 1979.[16]

The key indicator of the tightness of supply was the change of inventory levels that was observed between the two periods. The refiners of light fuel oil in Quebec started the 1978/1979 heating season with a September inventory position about 15 per cent lower than the previous year and contractual commitments for exports that amounted to 10 per cent of inventory levels for November 1978. As production levels fell in November 1978, (*versus* November 1977) the refiners were forced to draw down inventories a month earlier and to a greater extent than the previous year, in order to maintain net supply for the Quebec market, as well as for export markets. With production levels continuing to fall in January and February 1978 due to refinery equipment breakdowns, inventory levels went to about 50 per cent of the previous year's inventory figures. Inventories at the end of April, 1979 were 49 per cent lower than they were at the end of April 1978.

Inventory levels of kerosene and stove oil at the beginning of September 1978 were 13 per cent lower than those in September 1977. By the end of November and December, they had fallen 19 and 32 per cent below the previous year's levels as production decreased in those months. Inventories at the beginning of April 1979 were 30 per cent lower than they were in April 1978. A comparison of the relative size of the volumes of production, inventories, inter-product transfers and net supply suggests that decreases in net supply occurred because kerosene and stove oil were used by refiners to increase the supply of other petroleum products.

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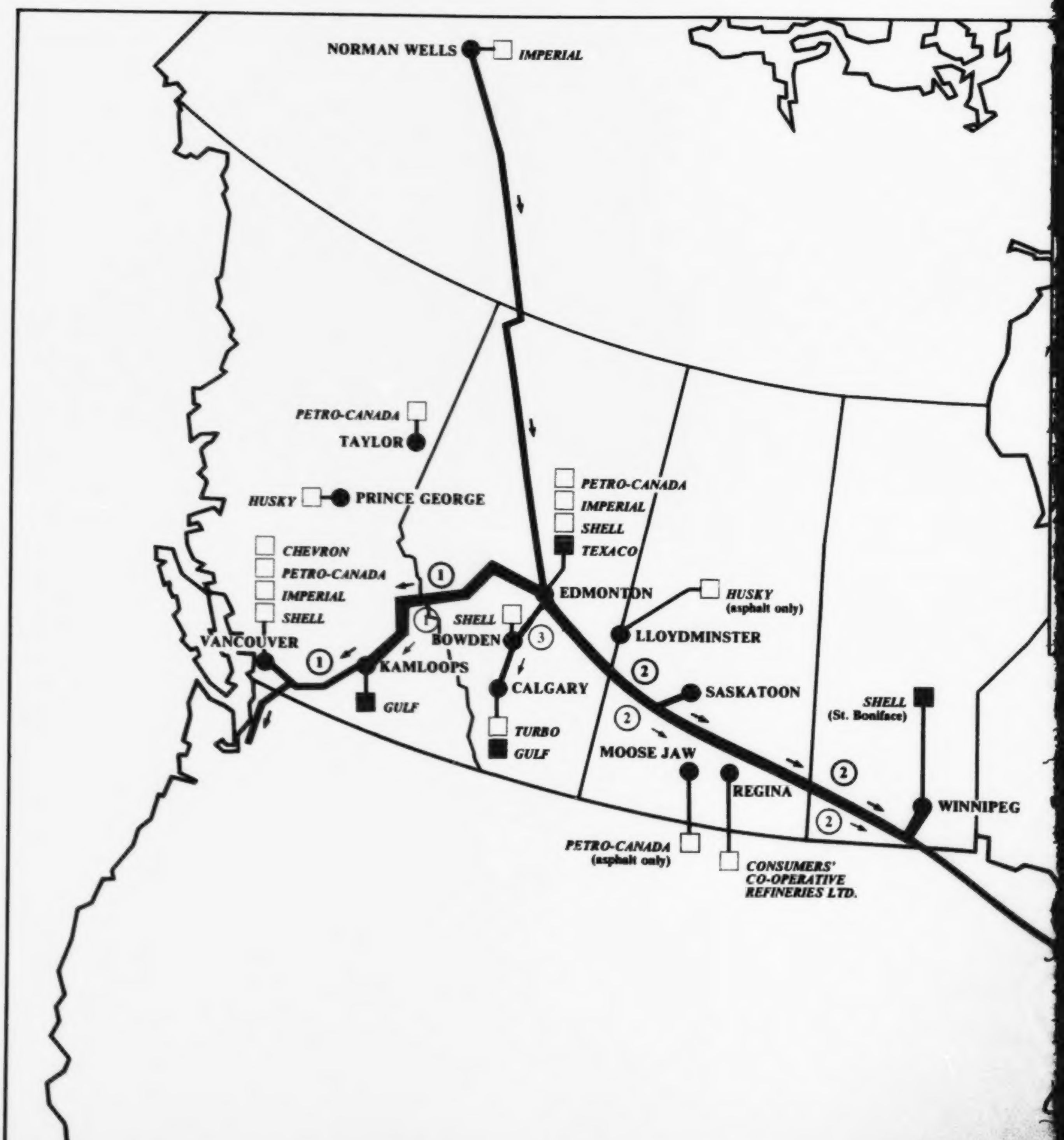
[16] See the relevant monthly issues for 1977 to 1979 of Statistics Canada, *Refined Petroleum Products* (Catalogue No. 45-004).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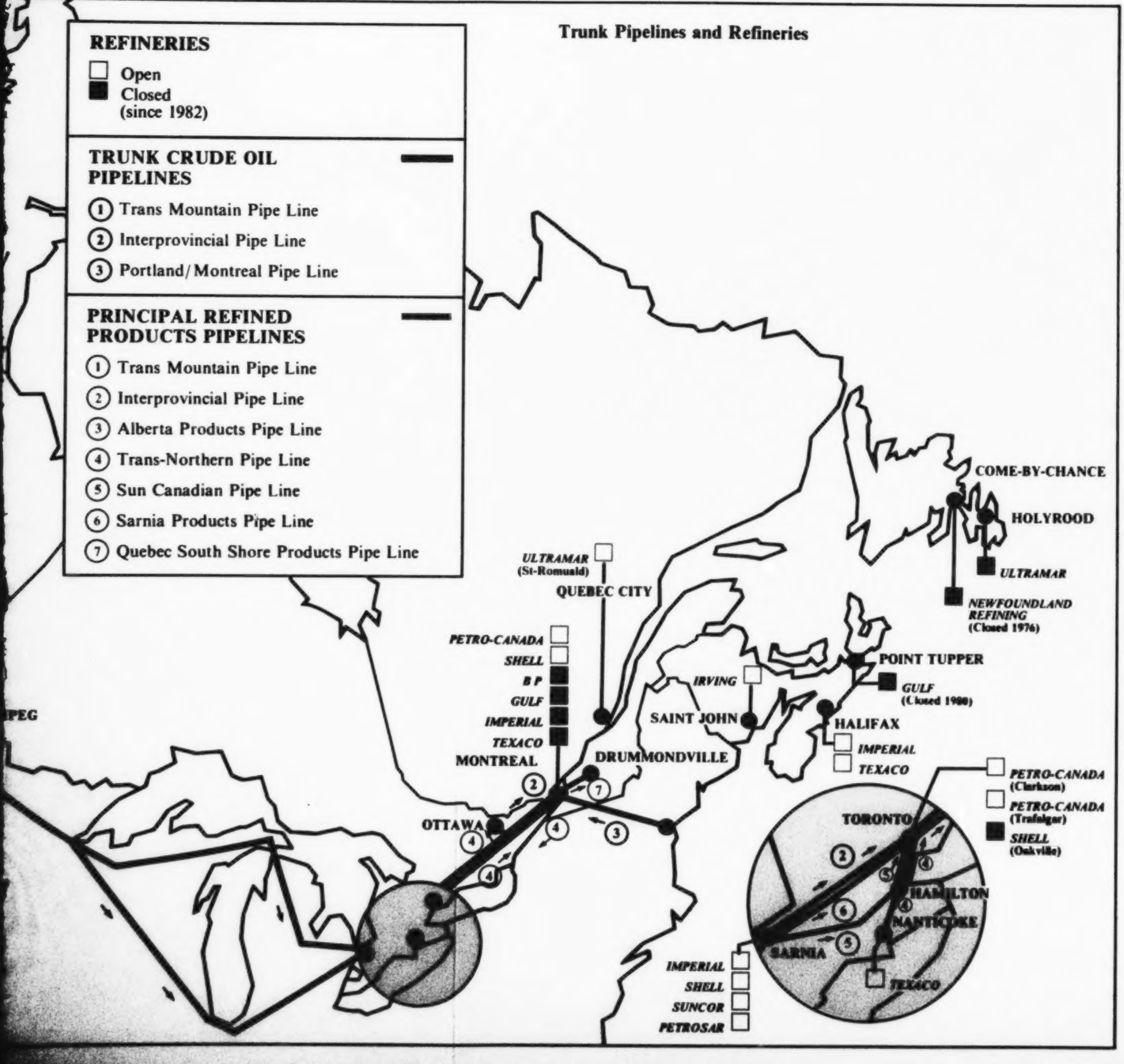
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⑤ Sun Canadian Pipe Line
⑥ Sarnia Products Pipe Line
⑦ Quebec South Shore Products Pipe Line
ULTRAMAR (St-Romuald)
QUEBEC CITY
PETRO-CANADA
SHELL
B P
GULF
IMPERIAL
TEXACO
MONTREAL
DRUMMONDVILLE
OTTAWA
IRVING
SAINT JOHN
HALIFAX
IMPERIAL
TEXACO
POINT TUPPER
GULF (Closed 1980)
COME-BY-CHANCE
HOLYROOD
ULTRAMAR
NEWFOUNDLAND REFINING (Closed 1976)
PEG
PETRO-CANADA (Clarkson)
PETRO-CANADA (Trafalgar)
SHELL (Oakville)
TORONTO
HAMILTON
NANTICOKE
SARNIA
TEXACO
IMPERIAL
SHELL
SUNCOR
PETROSAR